CDX-838

SERVICE MANUAL

US Model
Canadian Model
E Model

Model Name Using Similar Mechanism	NEW
CD Drive Mechanism Type	MG-250D-137
Optical Pick-up Name	KSS-521A/J2N

SPECIFICATIONS

System — Compact disc digital audio system
Laser diode properties
Material: GaAlAs
Wavelength: 780 nm
Emission Duration: Continuous
Laser Output Power: Less than 44.6 µW*

** This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.*

Frequency response — 5 – 20,000 Hz
Wow and flutter — Below the measurable limit
Signal-to-noise ratio — 99 dB
Outputs — Optical digital output
BUS control output (8 pins)
Analog audio output (RCA pin)
Current drain — 800 mA (during CD playback)
800 mA (during loading or ejecting a disc)
Operating temperature — –10°C to +55°C (14°F to 131°F)
Dimensions — Approx. 262 × 90 × 181.5 mm (10 3/8 × 3 5/8 × 7 1/4 in.) (w/h/d) not incl. projecting parts and controls
Mass — Approx. 2.1 kg (4 lb. 10 oz.)
Power requirement — 12 V DC car battery (negative ground)
Supplied accessories — Disc magazine (1)
Parts for installation and connections (1 set)

Design and specifications are subject to change without notice.

COMPACT DISC CHANGER

MICROFILM

SONY®

TABLE OF CONTENTS

1. SERVICING NOTES 2

2. GENERAL 3
Installation 4
Connections 5

3. DISASSEMBLY 6

4. MECHANISM DECK ASSEMBLY 12

5. MECHANICAL ADJUSTMENTS 14

6. ELECTRICAL ADJUSTMENTS 15

7. DIAGRAMS
7-1. Block Diagram – SERVO Section – 16
7-2. Block Diagram – MAIN Section – 17
7-3. Block Diagram – BUS CONTROL/POWER SUPPLY Section – 18
7-4. Note for Printed Wiring Boards and Schematic Diagrams 19
7-5. Printed Wiring Boards – RF/SW Boards – 20
7-6. Schematic Diagram – RF/SW Boards – 21
7-7. Printed Wiring Boards – MAIN Board (Component Side) – 22
7-8. Printed Wiring Board – MAIN Board (Conductor Side) – 23
7-9. Schematic Diagram – MAIN Board (1/3) – 24
7-10. Schematic Diagram – MAIN Board (2/3) – 25
7-11. Schematic Diagram – MAIN Board (3/3) – 26
7-12. Printed Wiring Boards – DIGITAL OUT /JACK Boards – 28
7-13. Schematic Diagram – DIGITAL OUT /JACK Boards – 29
7-14. IC Pin Function Description 33

8. EXPLODED VIEWS 36

9. ELECTRICAL PARTS LIST 41

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

Laser Diode Properties
- Material: GaAlAs
- Wavelength: 780 nm
- Emission Duration: continuous
- Laser Output Power: less than 44.6 µW*

  * This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Flexible Circuit Board Repairing
- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

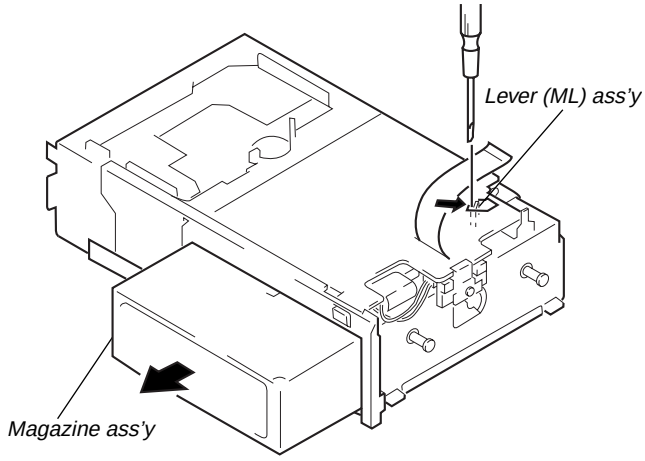
Notes on chip component replacement
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

DISC MAGAZINE GETTING OUT PROCEDURE ON THE POWER SUPPLY IS OFF

Remove the CASE (LOWER) assembly beforehand

1) Press the lever (ML) assy to arrow direction.
2) Removal the magazine assy.

Note: Take out the magazine only when the tray is completely within the magazine. If the disk or tray is sticking out, turn on the power and eject the magazine.



SECTION 2
GENERAL

This section is extracted from instruction manual.

Precautions

Moisture condensation

On a rainy day or in a very damp area, moisture may condense on the lenses inside the unit. Should this occur, the unit will not operate properly. In this case, **remove the disc magazine and wait for about an hour until the moisture has evaporated.**

Précautions

Remarque sur la condensation d'humidité

Par temps pluvieux ou dans des régions très humides, de la condensation peut se former sur les lentilles à l'intérieur de l'appareil. Dans ce cas, l'appareil ne fonctionne pas correctement. Dans ce cas, **retirez alors le chargeur de disques et attendez environ une heure jusqu'à ce que la condensation se soit évaporée.**

Precauciones

Condensación de humedad

En los días lluviosos o en zonas muy húmedas, puede condensarse humedad en las lentes del interior de la unidad. Si esto ocurre, ésta no funcionará correctamente. En este caso, **extraiga el cargador de discos y espere durante una hora aproximadamente hasta que la humedad se evapore.**

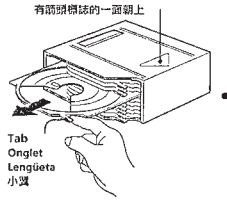
使用前須注意

濕氣冷凝

雨天或在潮濕的地方，機器內部的透鏡上面可能會生濕氣冷凝。遇這上百会發生時，機器將不能正常地作用。此時，請取出唱碟匣，等候大約一個小時讓冷凝水分完全蒸發乾燥。

Inserting a disc

1 With the arrow side facing up
Tab



Labeled surface up

10 discs, one in each tray

Use the supplied disc magazine or the disc magazine XA-250. The disc magazine XA-10B can not be used with this unit.If you use any other magazine,it may cause a malfunction.

Notes
- *To listen to an 8 cm (3 in.) CD, use the separately sold Sony CD adapter CSA-8. Be sure to always use the specified adapter, as failing to do so may cause a malfunction of the unit. If you use any other adapter, the unit may not operate properly. When using the Sony CD adapter, make sure the three catches on the adapter are firmly latched onto the 8 cm CD.*
- *Do not insert the Sony CD adapter CSA-8 in the magazine without a disc, malfunction may result.*

Insertion d'un disque

With the arrow side facing up
Avec la partie fléchée tournée vers le haut
Onglet

Etiquette vers le haut

10 disques, un par plateau

Utilisez le magasin à disques fourni ou un magasin à disques XA-250. Vous ne pouvez pas utiliser de magasin à disques XA-10B avec cet appareil. L'utilisation d'un autre type de magasin à disques risque de provoquer un dysfonctionnement.

Remarques
- *Pour écouter un disque de 8 cm (3 po.), utilisez l'adaptateur Sony CSA-8, vendu séparément, à l'exclusion de tout autre, pour éviter tout problème de fonctionnement. Si vous utilisez un autre adaptateur, l'appareil risque de ne pas fonctionner correctement. Quand vous utilisez l'adaptateur CD Sony, vérifiez que les trois griffes soient bien en prise sur le CD de 8 cm.*
- *Ne pas insérer d'adaptateur CD Sony CSA-8 dans le chargeur sans disque, car cela pourrait provoquer un dysfonctionnement.*

Inserción de discos

Con el lado de la flecha hacia arriba
Con la superficie de la etiqueta hacia arriba

10 discos, uno en cada bandeja

Emplee el cargador de discos suministrado o el XA-250. El cargador de discos XA-10B no puede utilizarse con esta unidad. Si emplea otro tipo de cargador, puede producir fallos de funcionamiento.

Notas
- *Para escuchar un disco compacto de 8 cm, utilice el adaptador de discos compactos Sony CSA-8, que podrá adquirir por separado. Asegúrese de utilizar siempre el adaptador especificado, ya que si utiliza otro tipo de adaptador es posible que la unidad no funcione correctamente. Al utilizar el adaptador de discos compactos Sony, asegúrese de que los tres enganches del adaptador están firmemente ajustados al disco compacto de 8 cm.*
- *No inserte el adaptador de discos compactos Sony CSA-8 en el cargador sin discos, ya que pueden producirse fallos de funcionamiento.*

裝入一張唱碟

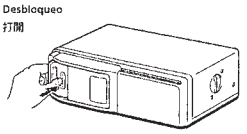
有箭號標誌的一面朝上
貼標籤面朝上

有 10 張唱碟，每一托盤裝一張

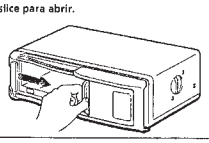
請使用附帶的唱碟匣或唱碟匣 XA-250。唱碟匣 XA-10B 這不能用於本機的。您如果隨便使用其他唱碟匣，將可能引起故障的。

註
- *要聽 8 cm CD 時，請用另選購的 Sony CD 轉接器 CSA-8。一定請使用指定的轉接器，否則將可能使機器故障。如果使用任何其他轉接器，機器將可能不能正常的操作。使用 Sony 牌 CD 轉接器時，請確認轉接器上的 3 個爪子確實地扣緊於 8 cm CD。*
- *不要把 Sony CD 轉接器 CSA-8 裝入沒有唱碟的唱碟匣中。*

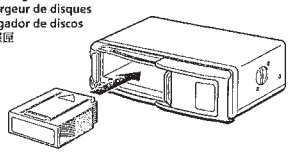
2 Unlock
Déverrouiller
Desbloquee
打開



Release, and slide open.
Relâchez et coulissez pour ouvrir.
Suelte y deslice para abrir.
釋放，滑開



3 Disc magazine
Chargeur de disques
Cargador de discos
唱碟匣



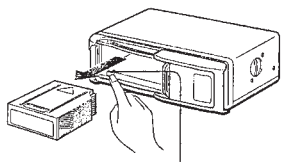
If the disc magazine does not lock properly
Take out the magazine, and after pressing the ⏏ (EJECT) button, re-insert it.

Si vous ne pouvez pas fermer le chargeur de disques
Sortez le chargeur et, après avoir appuyé sur la touche ⏏ (EJECT), réinsérez-le.

Si el cargador de discos no se cierra correctamente
Extraiga el cargador, pulse el botón ⏏ (EJECT) y vuelva a insertarlo.

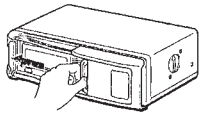
如果唱碟匣沒有鎖定妥當
請取出唱碟匣，按下 ⏏ (EJECT) 按理後再將它裝還去。

To remove
Retrait
Extracción
取出



⏏ (EJECT)

4



Use the unit with the door closed
Otherwise, foreign matter may enter the unit and contaminate the lenses inside the changer.

Utiliser cet appareil avec la trappe fermée
Sinon, des corps étrangers pourraient pénétrer dans l'appareil et encrasser les lentilles dans le lecteur.

Emplee la unidad con la puerta cerrada
De lo contrario podrían objetos extraños y contaminar las lentes del interior del cambiador.

請開上門使用機器
否則，會有雜垢進入機器並機換器內部的透鏡。

Note
When a disc magazine is inserted into the CD changer or the reset button of the connected car audio is pressed, the unit will automatically be activated and read the information on the CDs. When the information on all the CDs in the disc magazine has been read, the unit will automatically stop operation.

Remarque
Quand un chargeur de disques est inséré dans le changeur de CD ou si la touche de réinitialisation de l'autoradio raccordé est enclenchée, l'appareil se met automatiquement en marche et reproduit les CD. Lorsque tous les CD du chargeur ont été reproduits, l'appareil s'arrête automatiqement.

Nota
Cuando inserta un cargador de discos en el cambiador de discos compactos, o si está pulsado el botón de reposición del equipo de audio para automóvil conectado, la unidad se activará automáticamente y leerá la información de los discos compactos. Una vez leída la información de todos los discos compactos del cargador de discos, la unidad detendrá automáticamente la operación.

註
當把唱碟匣裝入 CD 機轉器或按下了連接著的汽車音響的重調按這鈕，機器即時自動接通電源，打開，並讀取 CD 上的資料。當讀完唱碟匣中所有 CD 上的資料時，機器即時自動停止操作。

Notes on the disc magazine

- Do not leave the disc magazine in locations with high temperatures and high humidity such as on a car dashboard or in the rear window where the disc magazine will be subjected to direct sunlight.
- Do not place more than one disc at a time onto one tray, otherwise the changer and the discs may be damaged.
- Do not drop the disc magazine or subject it to a violent shock.

Remarques sur le chargeur de disques

- Ne pas laisser le chargeur de disques dans un endroit très chaud ou très humide comme sur le tableau de bord ou sur la plage arrière de la voiture où il serait en plein soleil.
- Ne pas insérer plus d'un disque à la fois sur le plateau, sinon le changeur et les disques risquent d'être endommagés.
- Ne pas laisser tomber le chargeur de disques ni le cogner.

Notas sobre el cargador de discos

- No lo deje en lugares muy húmedos o con temperaturas altas, como en el salpicadero del automóvil o en la ventanilla trasera, expuesto a la luz solar directa.
- No inserte más de un disco en una bandeja de una vez, ya que en caso contrario el cambiador y los discos pueden dañarse.
- No lo deje caer ni lo exponga a golpes violentos.

唱碟匣須知

- 不要把唱碟匣放置在高溫、高濕的地方。例如放在汽車儀錶板上或車後窗下等唱碟匣會直接受直接日光照射到時光的地方。
- 一個托盤上不要同時裝放一張以上的唱碟。否則，可能會損壞換碟器和唱碟。
- 別讓唱碟匣掉落地上或受到強烈的衝擊。

When the tray comes out

Normally, the trays will not come out of the magazine. However, if they are pulled out of the magazine, it is easy to re-insert them.

Lorsque le plateau sort

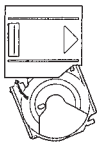
En principe, les plateaux ne sortent pas du chargeur. Toutefois, s'ils sortent du chargeur, il est facile de les réinsérer.

Si la bandeja se sale

Normalmente, las bandejas no se salen del cargador. No obstante, si esto ocurre, pueden volver a insertarse con facilidad.

脫出托盤時

通常，托盤是不會從唱碟匣中脫落的。但是萬一被拉出脫離唱碟匣，您可以很簡單地再把它裝回去的。



With the cut-away portion of the tray facing you, insert the right corner of the tray in the slot, then push in the left corner until it clicks.

Note
Do not insert the tray upside down or in the wrong direction.

Avec la portion découpée du plateau vous faisant face, insérer le coin droit du plateau dans la fente, puis enfoncer le coin gauche jusqu'au déclic.

Remarque
Ne pas insérer le plateau à l'envers ou dans le mauvais sens.

Con la parte de corte de la bandeja hacia afuera, inserte la esquina derecha de dicha bandeja en la ranura y, a continuación, ejerza presión en la esquina izquierda hasta oír un chasquido.

Nota
No inserte la bandeja al revés o en la dirección incorrecta.

讓托盤有缺口的一邊朝著自己方向將托盤右角插入槽中，然後壓入左角至聽到卡搭聲響。

註
裝插托盤時，切勿插反了面或潛方向。

Notes on compact discs

A dirty or defective disc may cause sound drop-outs during playback. To enjoy optimum sound, handle the disc as follows.

- **Handle the disc by its edge, and to keep the disc clean, do not touch the unlabeled surface. (fig. A)**
- **Do not stick paper or tape on the disc. (fig. B)**
- **Do not expose discs to direct sunlight or heat sources such as hot air-ducts. Do not leave discs in a car parked in direct sunlight where there can be a considerable rise in the temperature inside the car. (fig. C)**
- **Before playing, clean the discs with an optional cleaning cloth. Wipe each disc in the direction of the arrows. (fig. D)**
  Do not use solvents such as benzine, thinner, commercially available cleaners or antistatic spray intended for analog discs.

Notes on discs

If you use the discs explained below, the sticky residue can cause the CD to stop spinning and may cause malfunction or ruin your discs.

Do not use second-hand or rental CDs that have a sticky residue on the surface (for example from peeled-off stickers or from ink, or glue leaking from under the stickers).

- **There are paste residue. Ink is sticky. (fig. E)**
  Do not use rental CDs with old labels that are beginning to peel off.
- **Stickers that are beginning to peel away, leaving a sticky residue. (fig. F)**
  Do not use your CDs with labels or stickers attached.
- **Labels are attached. (fig. G)**

Remarques sur les disques compacts

Un disque sale ou défectueux peut provoquer des pertes de son à la lecture. Manipuler le disque comme suit pour obtenir un son optimal.

- **Manipuler le disque par son arête et le maintenir dans un état propre, ne pas le toucher sur la surface non imprimée. (fig. A)**
- **Ne pas coller de papier ou de bande adhésive sur le disque. (fig. B)**
- **Ne pas laisser les disques en plein soleil ou près d'une source de chaleur comme des conduits d'air chaud. Ne pas laisser les disques dans une voiture garée en plein soleil car la température de l'habitacle risque d'augmenter considérablement. (fig. C)**
- **Avant la lecture, essuyer les disques avec un chiffon de nettoyage en option. Essuyer chaque disque dans le sens des flèches. (fig. D)**
  Ne pas utiliser de solvants tels que de la benzine, du diluant, des produits de nettoyage vendus dans le commerce ou de vaporisateurs anti-statiques destinés aux disques analogiques.

Remarques sur les disques

Si vous utilisez les disques décrits ci-dessous, le résidu adhésif risque de provoquer l'arrêt de la rotation du CD et d'entraîner un dysfonctionnement ou d'endommager vos disques.

N'utilisez pas de CD de seconde main ou de location qui présentent des résidus adhésifs à la surface (par exemple d'étiquettes décollées ou d'encre, de colle dépassant de l'étiquette).

- **Résidus de colle. L'encre colle. (fig. E)**
  N'utilisez pas de CD de location avec d'anciennes étiquettes qui commencent à se décoller.
- **Les étiquettes qui commencent à se décoller laissent des résidus adhésifs. (fig. F)**
  N'utilisez pas vos CD avec des étiquettes ou des autocollants apposés dessus.
- **Les étiquettes sont fixées. (fig. G)**

Notas sobre discos compactos

Es posible que se produzca ausencia de sonido durante la reproducción, si el disco está sucio o es defectuoso. Para disfrutar de una calidad de sonido óptima, utilice el disco de la siguiente forma.

- **Maneje el disco por los bordes. Para mantenerlo limpio, no toque la superficie sin etiqueta. (fig. A)**
- **No adhiera papeles ni cinta sobre el disco. (fig. B)**
- **No exponga los discos a la luz solar directa ni a fuentes térmicas, como conductos de aire caliente. No deje los discos en un automóvil aparcado bajo la luz solar directa donde pueda producirse un considerable aumento de temperatura en el interior de dicho automóvil. (fig. C)**
- **Antes de la reproducción, limpie los discos con un paño de limpieza opcional en la dirección de las flechas. (fig. D)**
  No utilice disolventes como bencina, diluyentes, productos de limpieza disponibles en tiendas del ramo ni aerosoles antiestáticos destinados a discos analógicos.

Notas sobre los discos

Si emplea los discos descritos a continuación, el residuo adherente puede causar que el CD deje de girar y producir fallos de funcionamiento o dañar los discos.

No utilice discos compactos de segunda mano o de alquiler que tengan residuos adherentes en la superficie (por ejemplo, de adhesivos despegados o tinta, o de restos de pegamento de los adhesivos).

- **Residuos adherentes. Tinta adherente. (fig. E)**
  No utilice discos compactos de alquiler con etiquetas viejas que estén comenzando a despegarse.
- **Adhesivos que empiezan a despegarse, dejando un residuo adherente. (fig. F)**
  No emplee discos compactos con etiquetas o adhesivos fijados.
- **Etiquetas adheridas. (fig. G)**

雷射唱碟須知

唱碟髒了或變形，可能會在放音時發生雜音脫落現象。為保持良好的音質條件，請按照如下所述正確地清潔。

- **請拿唱碟邊緣以保持唱碟清潔，不要接觸沒貼標簽的唱碟面。(圖 A)**
- **不要在唱碟上貼紙條或黏膠帶。(圖 B)**
- **不要讓唱碟暴露於直射陽光下或熱氣容等熱源旁邊-也不要把唱碟放在停駐在炎陽下的汽車裡，因為那裡會升到很高的溫度。(圖 C)**
- **放音前，請用選購件的清潔用布擦拭乾淨唱碟-如圖所示循治箭頭所指方向擦拭。(圖 D)**
  不可利用油類，稀釋劑，市售的清潔劑或唱碟或唱碟用的抗靜電噴射劑等溶劑清潔唱碟。

唱碟須知

如果使用下面所述唱碟，則留在唱碟上的黏膠將會導至 CD 停止旋轉，甚至可能導至損壞故障或毀壞唱碟。

決不要使用表面殘留有指紋或的二手落唱碟或出租的 CD 唱碟（例如撕掉了標籤的位置，印墨，漏貼標籤經過出的多餘黏膠）。

- **有未乾印墨或殘餘黏膠。(圖 E)**
  別用那些剛剛被剝離的出租 CD 唱碟。
- **標籤部分剝離，留下黏性殘餘。(圖 F)**
  別用有加貼了標籤或紙類的 CD。
- **附貼標籤。(圖 G)**

Installation

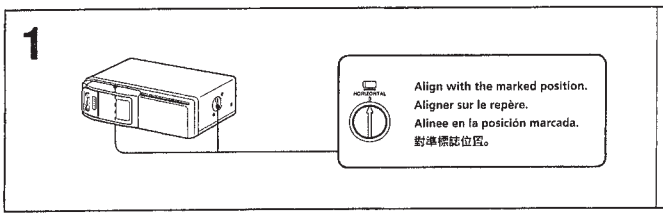
Precautions

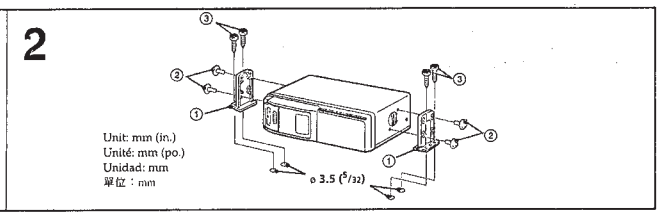
- Choose the mounting location carefully, observing the following:
  - The unit is not subject to temperatures exceeding 55°C (131°F) (such as in a car parked in direct sunlight).
  - The unit is not subject to direct sunlight.
  - The unit is not near heat sources (such as heaters).
  - The unit is not exposed to rain or moisture.
  - The unit is not exposed to excessive dust or dirt.
  - The unit is not subject to excessive vibration.
  - The fuel tank should not be damaged by the tapping screws.
  - There should be no wire harnesses or pipes under the place where you are going to install the unit.
  - The spare tire, tools or other equipment in or under the trunk should not be interfered with or damaged by the screws or the unit itself.
- Be sure to use only the supplied mounting hardware for a safe and secure installation.
- Use only the supplied screws.
- Make holes of ø 3.5 mm ($^{5}/_{32}$ in.) only after making sure there is nothing on the other side of the mounting surface.

How to install the unit

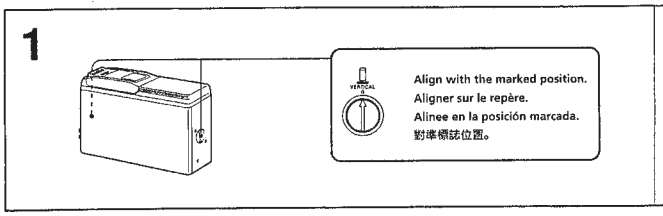
The brackets ① provide two positions for mounting, high and low. Use the appropriate screw holes according to your preference.

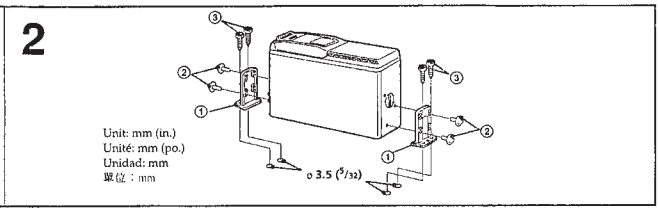
Horizontal installation





Vertical installation

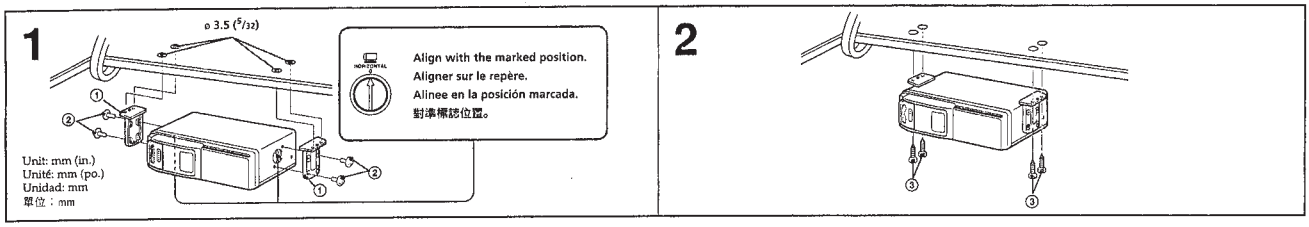




Suspended installation

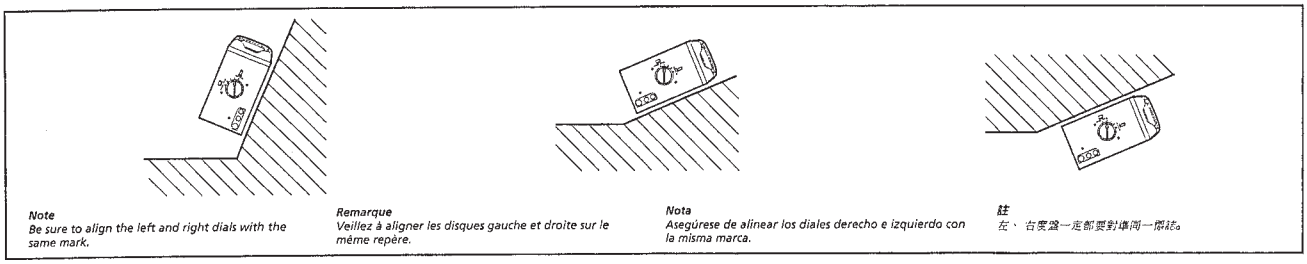
When the unit is to be installed under the rear tray etc. in the trunk compartment, make sure the following provisions are made.

- Choose the mounting location carefully so that the unit can be installed horizontally.
- Make sure the unit does not hinder the movement of the torsion bar spring etc. of the trunk lid.



Inclined installation

After installing the unit, align the dials with one of the marks so that the arrow comes as close to a vertical position as possible.



Note
Be sure to align the left and right dials with the same mark.

Installation

Précautions

- Choisir l'emplacement de montage en tenant compte des observations suivantes:
  - Appareil non soumis à des températures dépassant 55°C (131°F) (comme dans une voiture parquée au soleil).
  - Appareil non soumis au rayonnement solaire direct.
  - Appareil à l'écart de sources de chaleur (comme des radiateurs).
  - Appareil non exposé à la pluie ou à l'humidité.
  - Appareil non exposé à des poussières ou à des souilliures en excès.
  - Appareil non exposé à des vibrations excessives.
  - Vérifier que le réservoir d'essence ne risque pas d'être endommagé par les vis taraudeuses.
  - Il ne doit pas y avoir de faisceau de fils ou de tuyaux à l'emplacement du montage.
  - Vérifier que l'appareil ou les vis ne risquent pas d'endommager ou de gêner la roue de secours, les outils, ou autre objet dans le coffre.
- Pour garantir la sécurité de l'installation, utiliser uniquement le matériel de montage fourni.
- Utiliser uniquement les vis fournies.
- Ne percez les trous de 3,5 mm ($^{5}/_{32}$ po.) ø qu'après vous être assuré qu'il n'y avait rien de l'autre côté de la surface de montage.

Installation de l'appareil

Les supports ① offrent deux positions de montage, haut et bas. Utilisez les trous de vissage appropriés en fonction de vos préférences.

Installation horizontale

Installation verticale

Installation suspendue

Si l'appareil doit être installé sous la plage arrière dans le coffre par exemple, observer les précautions suivantes.

- Bien choisir l'emplacement pour pouvoir installer l'appareil à l'horizontale.
- Vérifier que l'appareil ne gêne pas les mouvements du ressort de fermeture du coffre, entre autres.

Installation inclinée

Après avoir installé l'appareil, alignez le disque sur l'un des repères afin que la flèche soit aussi proche que possible de la position verticale.

Remarque
Veillez à aligner les disques gauche et droite sur le même repère.

Instalación

Precauciones

- Elija cuidadosamente el lugar de montaje, teniendo en cuenta lo siguiente:
  - La unidad no queda sometida a temperaturas superiores a los 55°C (como en un automóvil aparcado a la luz solar directa).
  - La unidad no queda sometida a la luz solar directa.
  - La unidad no queda cercana a fuentes térmicas (como aparatos de calefacción).
  - La unidad no queda expuesta a la lluvia o a la humedad.
  - La unidad no queda expuesta a polvo o suciedad excesivos.
  - La unidad no queda sometida a vibraciones excesivas.
  - El depósito de combustible no deberá dañarse con los tornillos autorroscantes.
  - No deberá haber mazos de conductores ni tubos debajo del lugar donde vaya a instalar la unidad.
  - La rueda de repuesto, las herramientas, u otros equipos situados dentro o debajo del portaequipajes no deberán verse interferidos ni dañados por los tornillos ni por la propia unidad.
- Para realizar una instalación segura, emplee solamente la ferretería de montaje suministrada.
- Utilice sólo los tornillos suministrados.
- Antes de hacer los orificios de ø 3,5 mm, compruebe que no haya nada en el otro lado de la superficie de montaje.

Forma de instalar la unidad

Los soportes ① proporcionan dos posiciones de montaje, alta y baja. Utilice los orificios para tornillo apropiados según sus preferencias.

Instalación horizontal

Instalación vertical

Instalación suspendida

Cuando desee instalar la unidad debajo de la bandeja trasera, etc. en el interior del portaequipajes, tenga en cuenta lo siguiente:

- Elija cuidadosamente el lugar de montaje de forma que la unidad pueda instalarse horizontalmente.
- Cerciórese de que la unidad no impida el movimiento del resorte de la barra de torsión, etc., de la tapa del portaequipajes.

Instalación sobre una superficie inclinada

Después de instalar la unidad, alinee los diales con una de las marcas, de forma que la flecha quede orientada en posición vertical tanto como sea posible.

Nota
Asegúrese de alinear los diales derecho e izquierdo con la misma marca.

安裝

使用前須注意

- 請參照下列各項仔細選擇安裝位置：
  - 機器不能遭受超過 55°C 的溫度（例如停駐於炎陽下的汽車內）。
  - 機器不可直接照射到陽光。
  - 機器不可靠近熱源（例如加熱器等）。
  - 不要讓機器暴露雨中或潮濕處。
  - 不要把機器放在多塵或污穢的地方。
  - 別讓機器受到強烈的震動。
  - 小心別讓攻絲螺釘損傷了燃油箱。
  - 注意安裝機器位置下面不要有電線束或配管。
  - 行李箱中或下面的備胎，工具或其他設備的取存不可受到機器的安裝螺釘或機器本身的干擾或損傷。
- 為了安裝確實和安全，請限使用附帶的安裝五金件。
- 限使用附帶的螺絲釘。
- 務請在確認安裝面的另一側沒有任何其他物品之後鑽 ø 3.5 mm 的孔。

如何安裝機器

支架①提供了兩種安裝位置，高和低。跟據您的考慮，請使用合適的螺孔。

水平安裝

豎直安裝

懸掛安裝

機器安裝在後行李箱托架下面等位置時，必須作好如下的準備。

- 小心地選擇能水平地安裝機器的位置。
- 確認機器是否不會阻挠後行李箱蓋的扭棒彈簧等。

傾斜安裝

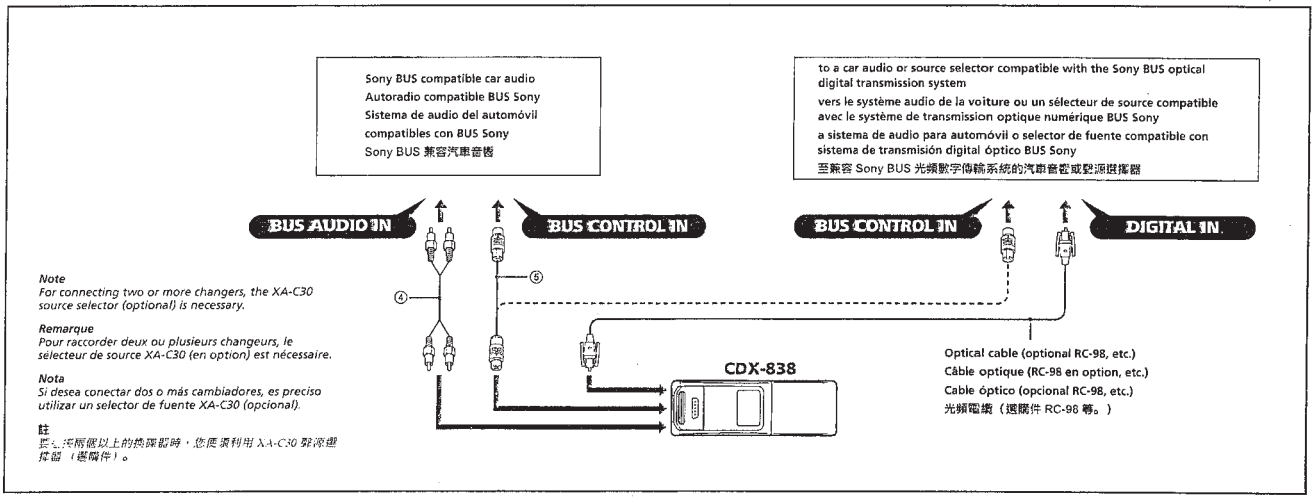
安裝好機器之後，請旋轉度盤對準標誌中的一個使箭頭盡可能呈垂直方向的位置。

註
左、右度盤一定都要對準同一個記。

Connections

For details, refer to the Installation/ Connections manual of each product.

Connection diagram


Sony BUS compatible car audio
Autoradio compatible BUS Sony
Sistema de audio del automóvil compatibles con BUS Sony
Sony BUS 兼容汽車音響
to a car audio or source selector compatible with the Sony BUS optical digital transmission system
vers le système audio de la voiture ou un sélecteur de source compatible avec le système de transmission optique numérique BUS Sony
a sistema de audio para automóvil o selector de fuente compatible con sistema de transmisión digital óptico BUS Sony
至兼容 Sony BUS 光頻數字傳輸系統的汽車音響或聲源選擇器
BUS AUDIO IN
BUS CONTROL IN
BUS CONTROL IN
DIGITAL IN
CDX-838
Optical cable (optional RC-98, etc.)
Câble optique (RC-98 en option, etc.)
Cable óptico (opcional RC-98, etc.)
光頻電纜（選購件 RC-98 等。）

Note
For connecting two or more changers, the XA-C30 source selector (optional) is necessary.

Remarque
Pour raccorder deux ou plusieurs changeurs, le sélecteur de source XA-C30 (en option) est nécessaire.

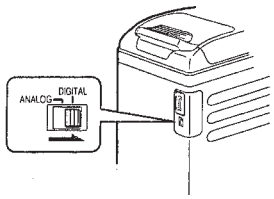
Nota
Si desea conectar dos o más cambiadores, es preciso utilizar un selector de fuente XA-C30 (opcional).

註
若要連接兩個以上的換碟器時，您需要利用 XA-C30 聲源選擇器（選購件）。

Connecting the optional optical cable

1

Set the DIGITAL/ANALOG switch on the side of the CD changer to DIGITAL.
Mettre le commutateur DIGITAL/ANALOG sur le côté du changeur de CD sur DIGITAL.
Ajuste el selector DIGITAL/ANALOG, situado en la parte posterior del cambiador de discos compactos, en la posición DIGITAL.
將在 CD 換碟器側的 DIGITAL/ANALOG（數字／模擬）開關設定於 DIGITAL。



After changing the position of the switch, be sure to press the reset button on the main unit.

Notes
- *This switch is factory-set to the ANALOG position.*
- *Improper setting of the switch may prevent any sound from being reproduced even when the CD changer is activated.*

Après avoir modifié la position du commutateur, veiller à appuyer sur la touche de réinitialisation de l'appareil principal.

Remarques
- *Ce sélecteur est préréglé en usine sur la position ANALOG (analogique).*
- *Un réglage incorrect du sélecteur peut empêcher la reproduction du son même quand le changeur de CD fonctionne.*

Una vez cambiada la posición del selector, asegúrese de presionar el botón de reposición de la unidad principal.

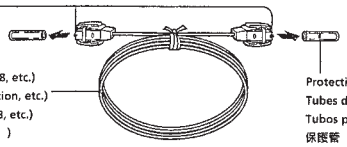
Notas
- *Este selector ha sido ajustado en fábrica a ANALOG.*
- *El ajuste inadecuado del selector podría impedir la reproducción de sonido incluso aunque el cambiador de discos compactos estuviese activado.*

切換了開關位置之後，一定要按下主機上的重調按鈕。

註
- *本開關的工廠設定是設定在 ANALOG（模擬位置）。*
- *開關如果設定不對，即使已啟活（打開）了 CD 換碟器，仍可能不能再現任何聲音。*

2

Do not touch the coupler parts.
Ne pas toucher les pièces du coupleur.
No toque las partes de acoplamiento.
不要接解連接器部分。

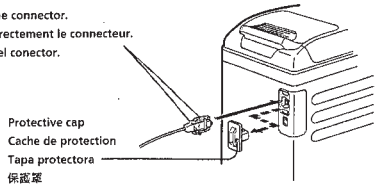


Optical cable (optional RC-98, etc.)
Câble optique (RC-98 en option, etc.)
Cable óptico (opcional RC-98, etc.)
光頻電纜（選購件 RC-98 等。）

Protective tubes (to be removed)
Tubes de protection (à enlever)
Tubos protectores (a quitar)
保護管（須移除）

3

Remove the protective cap, and firmly plug in the connector.
Retirez le bouchon de protection et enfichez correctement le connecteur.
Retire la tapa protectora y enchufe firmemente el conector.
移除保護罩蓋固地插到接頭上。



Protective cap
Cache de protection
Tapa protectora
保護罩

Notes
- *When you wish to disconnect the cable, simply push in on both sides of the connector.*
- *Be sure to keep the protective cap in a safe place for future use.*

Remarques
- *Pour débrancher le câble, appuyer simplement sur les deux côtés du connecteur.*
- *Garder le capuchon de protection dans un endroit sûr pour une utilisation ultérieure.*

Notas
- *Cuando desee desconectar el cable, simplemente presione ambos lados del conector.*
- *Asegúrese de guardar la tapa protectora en un lugar seguro para utilizarla en el futuro.*

註
- *要卸下連接電纜時，只要按下接頭的兩側。*
- *保護蓋應妥為保存供將來使用。*

Notes on the optical cable
Observe the following when connecting the cable:
- *— Do not bend the cable too much. If the bent part (arc) is less than 10 cm (4 in.) in diameter, sound may not be reproduced.*
- *— Make sure the cable does not get compressed or constricted in any way by objects around it.*
- *— Never let the coupler parts of the connectors get scratched or become contaminated with dirt.*
- *— If this unit is not connected to a car audio compatible with the Sony BUS optical digital transmission system, reinstall the protective cap to its original position.*
- *— Use an optical cable designed for Sony car audio systems.*
- *— Not all optical cables can be used with this CD changer.*

Remarques sur le câble optique
Lors de la connexion du câble:
- *— Ne pas forcer le câble en le pliant. Si la partie courbée (coude) fait moins de 10 cm (4 po.) de diamètre, il est possible que le son ne soit pas reproduit.*
- *— Vérifier que le câble n'est pas coincé ou écrasé par des objets environnants.*
- *— Protéger les pièces du coupleur des égratignures eet de la saleté.*
- *— Si cet appareil n'est pas raccordé à un autoradio compatible avec le système de transmission numérique optique BUS Sony digital, réinstaller le capuchon de protection dans sa position d'origine.*
- *— Utilisez un câble optique conçu pour les systèmes audio pour voiture Sony.*
- *— Tous les câbles optiques ne peuvent pas être utilisés avec ce changeur de CD.*

Notas sobre el cable óptico
Tenga en cuenta lo siguiente cuando conecte el cable:
- *— No doble el cable excesivamente. Si el diámetro de la parte doblada (arco) es inferior a 10 cm, es posible que el sonido no se reproduzca.*
- *— Compruebe que el cable no quede oprimido por objetos que se encuentren a su alrededor.*
- *— No deje nunca que las partes de acoplamiento de los conectores se rayen ni se ensucien.*
- *— Si esta unidad no se conecta a un sistema de audio de automóvil compatible con el sistema de transmisión digital óptico BUS de Sony, vuelva a instalar la tapa protectora en su posición original.*
- *— Utilice un cable óptico diseñado para los sistemas de audio para automóvil Sony.*
- *— No todos los cables ópticos pueden utilizarse con este cambiador de discos compactos.*

光頻電纜須知
連接電纜時，請參照以下事項：
- *— 不要過度折彎電纜。彎曲部分的曲率直徑小於 10 cm 時，聲音可能不能再現。*
- *— 確認電纜是否沒被周圍物體擠壓著。*
- *— 別把接頭的連接部分弄刮或污染。*
- *— 本機不連接於兼容 Sony BUS 光頻數字傳輸系統的汽車音響時，請將保護蓋蓋到原位置上。*
- *— 請用 Sony 汽車音響系統專用的光頻電纜。*
- *— 本 CD 換碟器並不是所有光頻電纜都可以利用的。*

Connexions

Pour plus de détails, consulter le manuel d'installation/connexions de chaque produit.

Schéma de connexion

Connexion du câble optique en option

Conexiones

Con respecto a los detalles, consulte el manual de instalación/conexiones de cada producto.

Diagrama de conexiones

Conexión de un cable óptico

連接

詳細請參考各產品的安裝／連接說明。

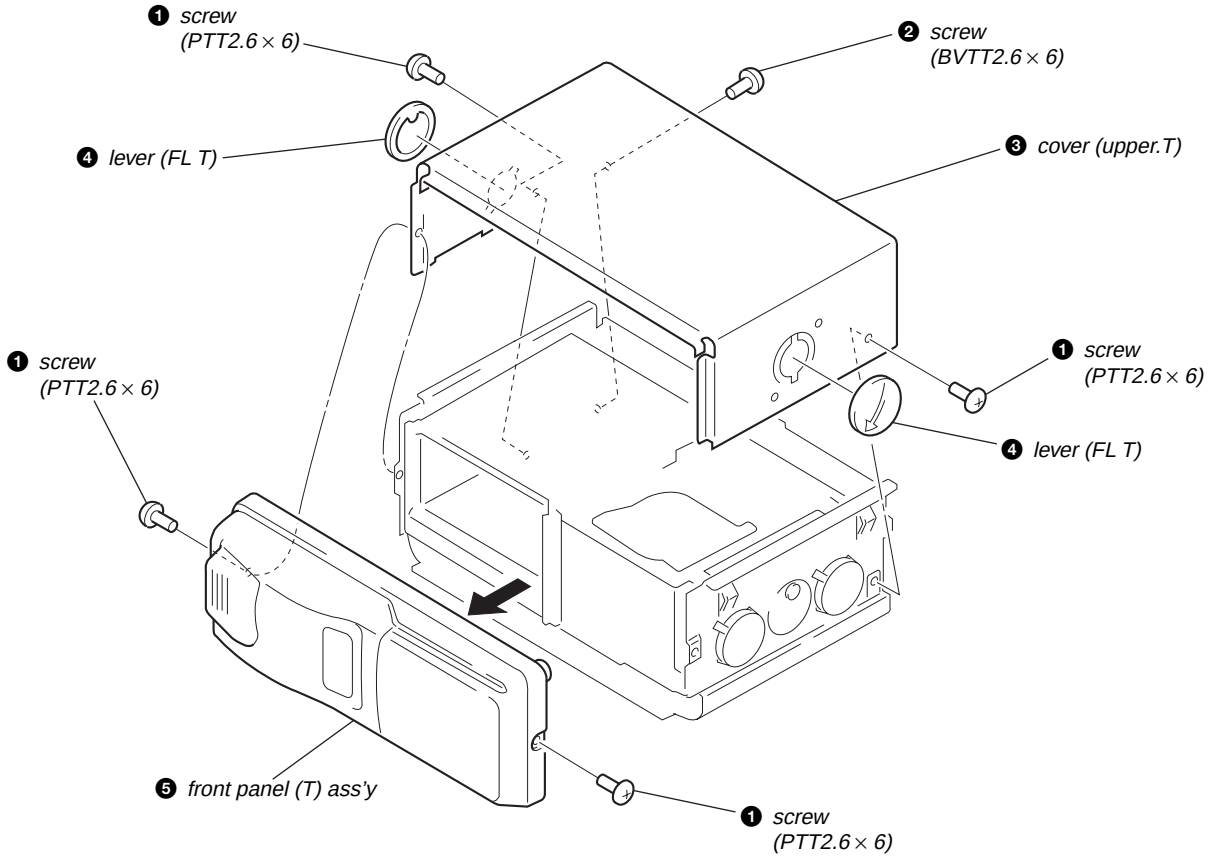
接線圖

連接選購件的光頻電纜

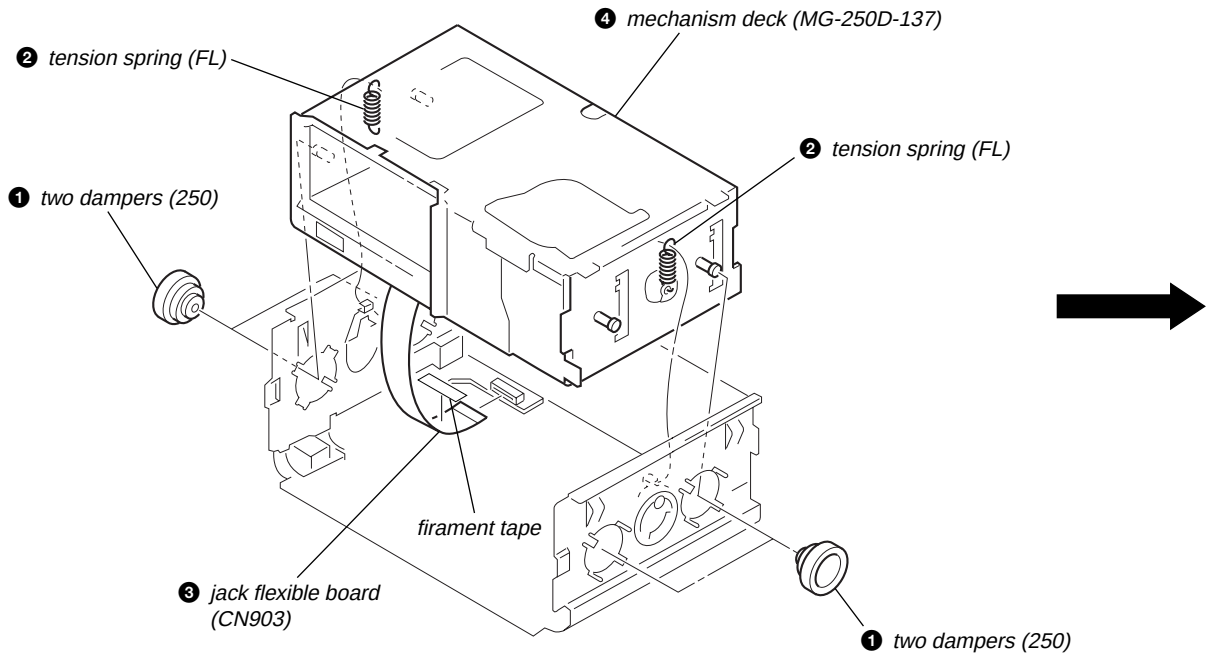
SECTION 3
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

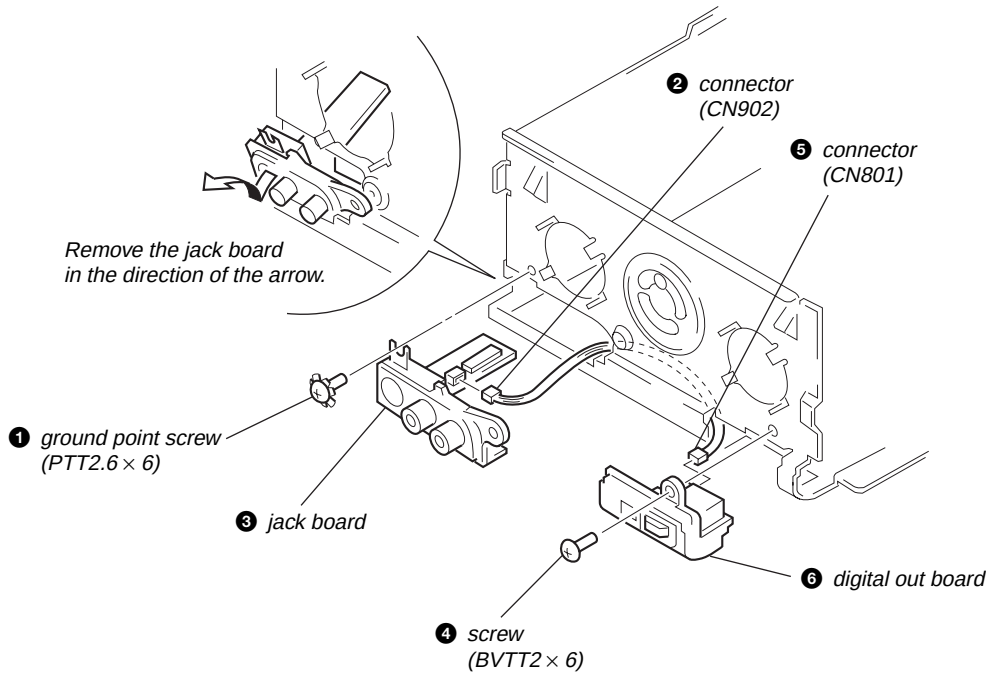
COVER (UPPER.T) , FRONT PANEL (T) ASS'Y


❶ screw (PTT2.6 × 6)
❷ screw (BVTT2.6 × 6)
❹ lever (FL T)
❸ cover (upper.T)
❶ screw (PTT2.6 × 6)
❶ screw (PTT2.6 × 6)
❹ lever (FL T)
❺ front panel (T) ass'y
❶ screw (PTT2.6 × 6)

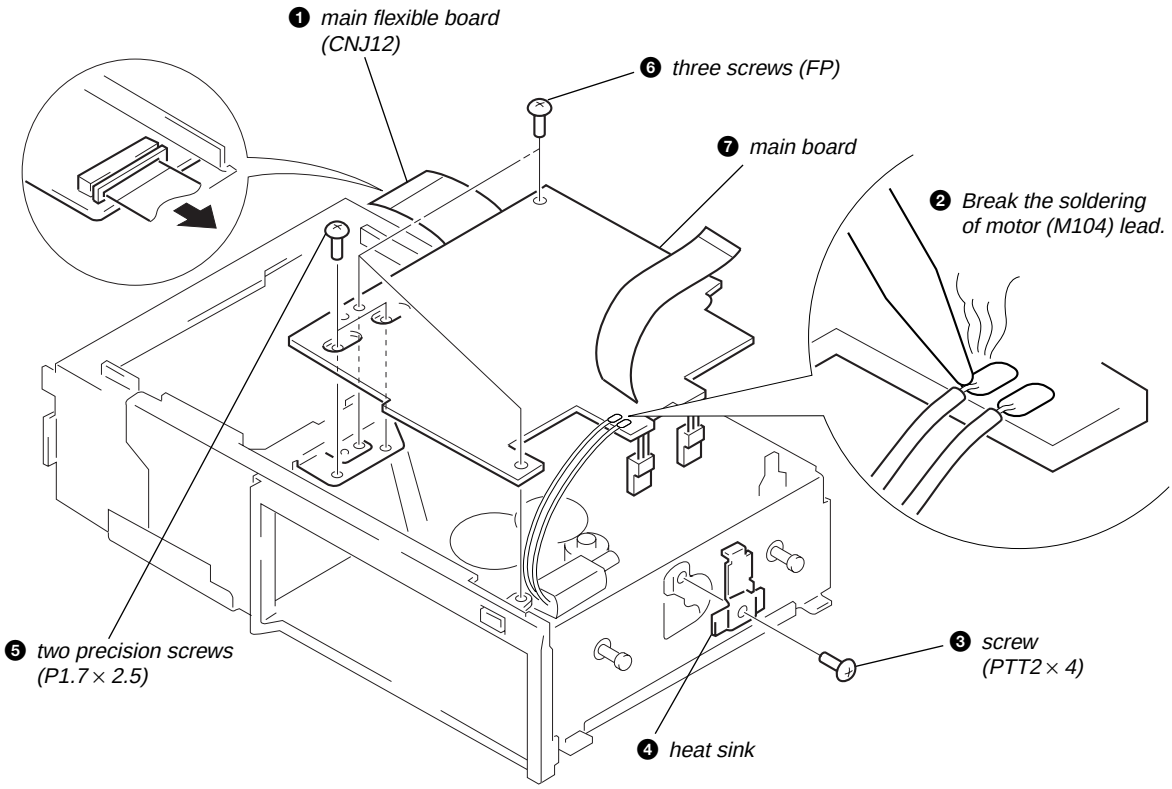
MECHANISM DECK (MG-250D-137)



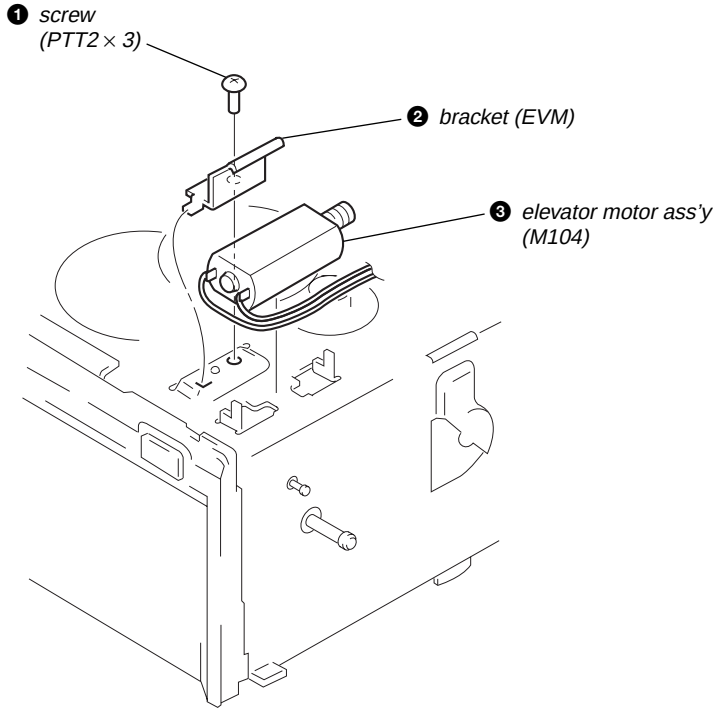
JACK BOARD, DIGITAL OUT BOARD



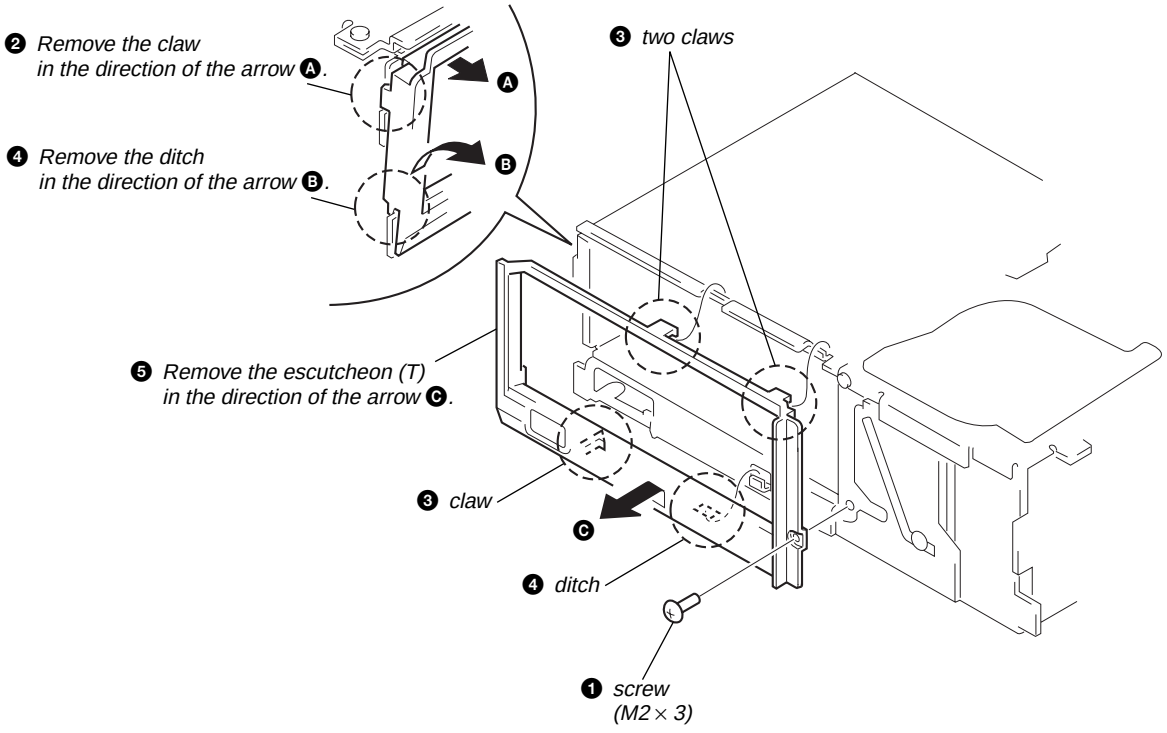
MAIN BOARD



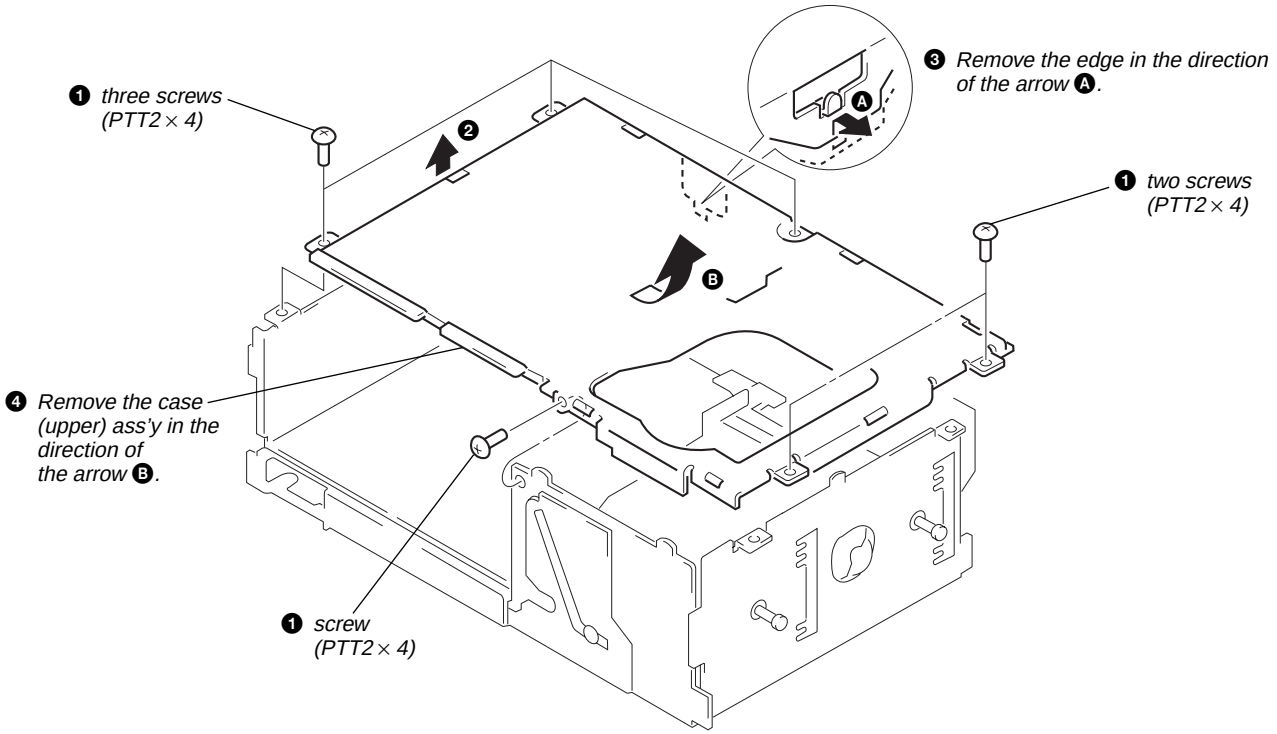
ELEVATOR MOTOR ASS'Y (M104)



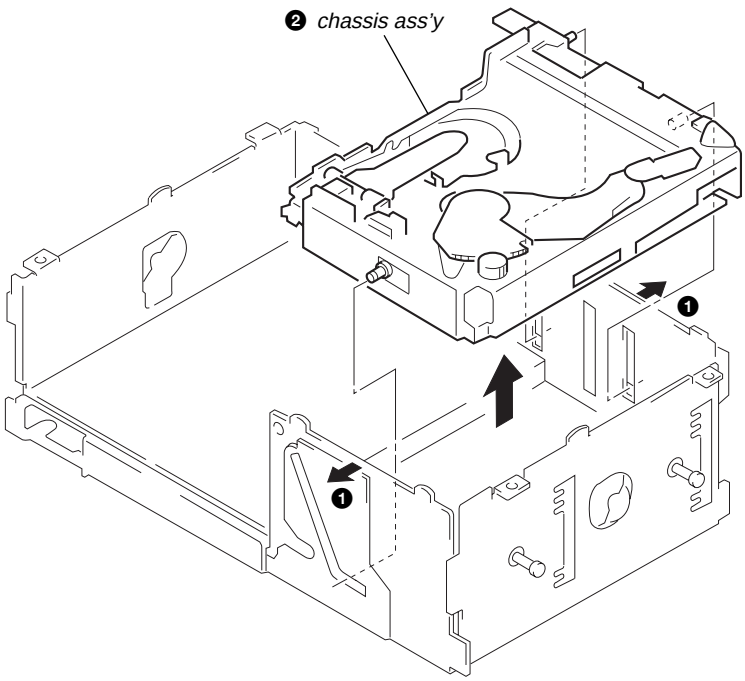
ESCUTCHEON (T)


❷ Remove the claw
in the direction of the arrow Ⓐ.
❹ Remove the ditch
in the direction of the arrow Ⓑ.
❸ two claws
❺ Remove the escutcheon (T)
in the direction of the arrow Ⓒ.
❸ claw
❹ ditch
❶ screw
(M2 × 3)

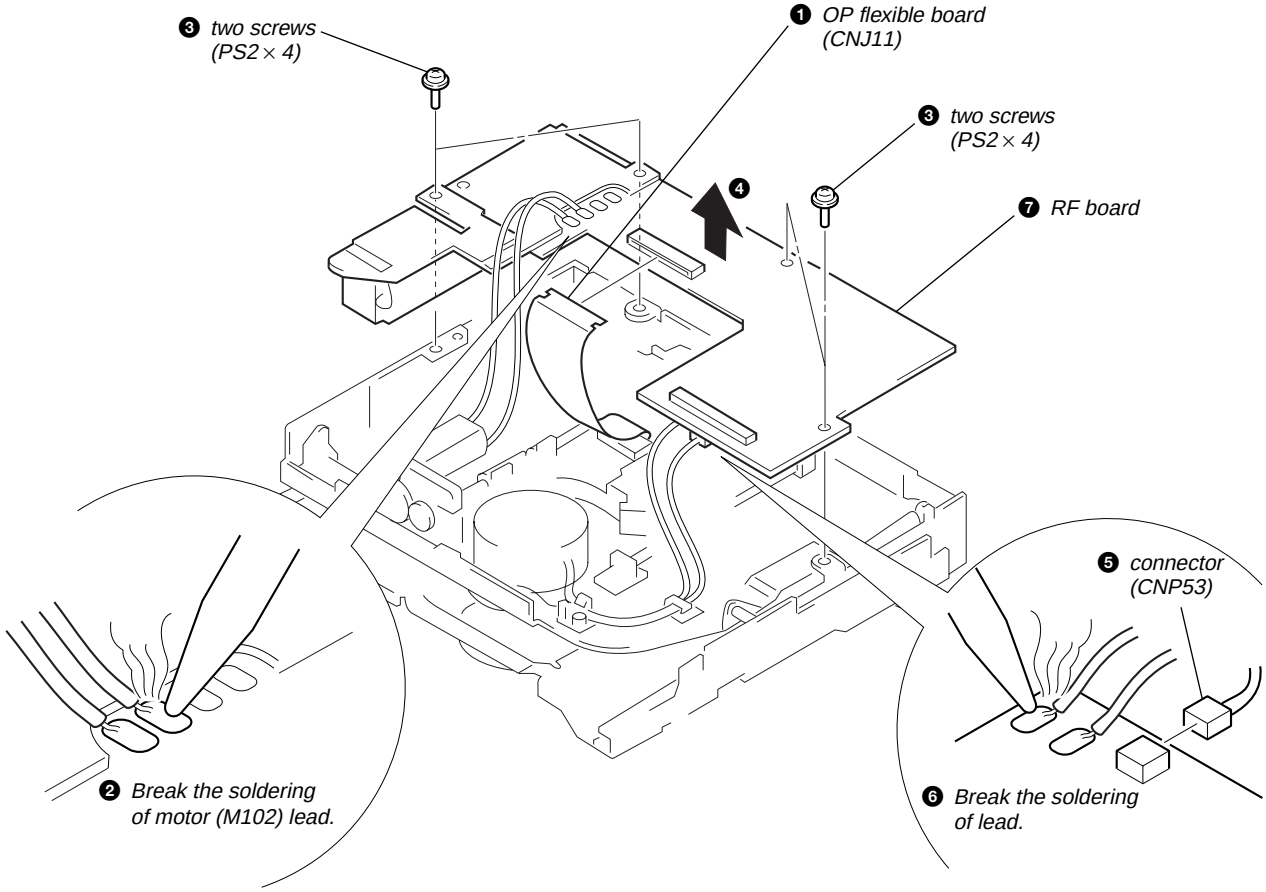
CASE (UPPER) ASS'Y


❶ three screws (PTT2 × 4)
❷
❸ Remove the edge in the direction of the arrow Ⓐ.
Ⓐ
❶ two screws (PTT2 × 4)
Ⓑ
❹ Remove the case (upper) ass'y in the direction of the arrow Ⓑ.
❶ screw (PTT2 × 4)

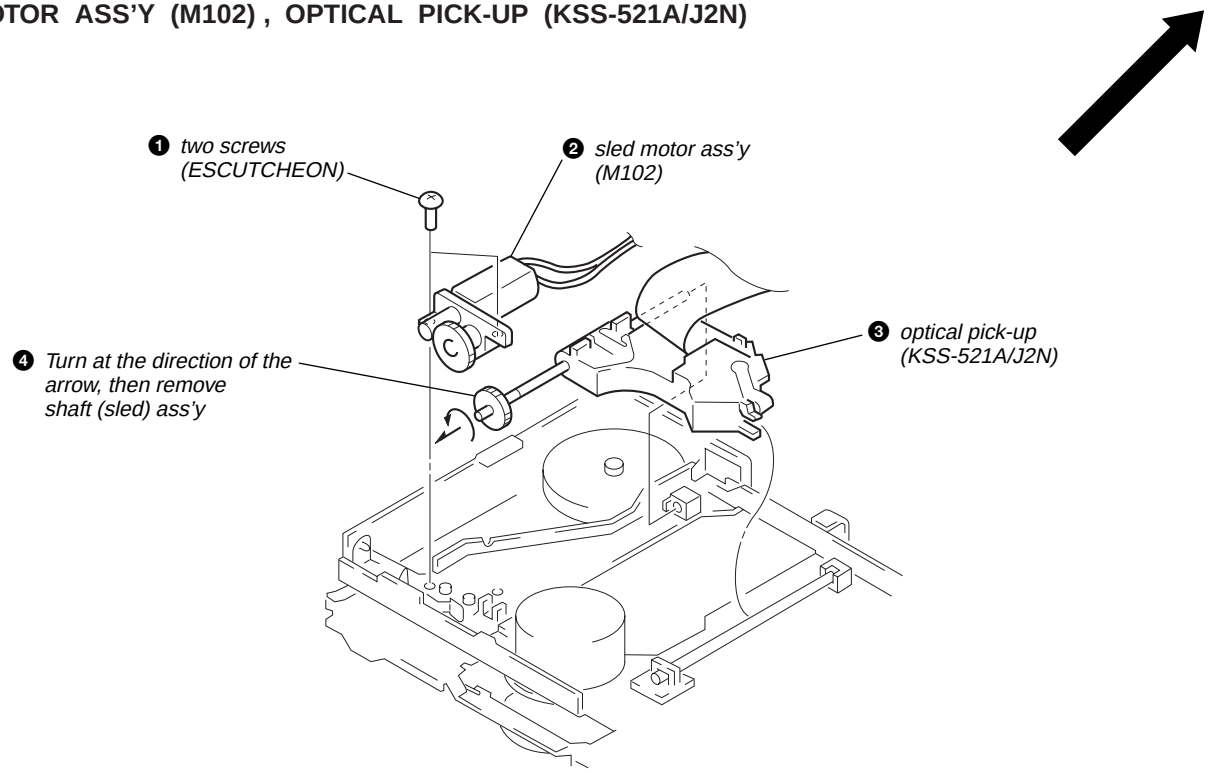
CHASSIS ASS'Y



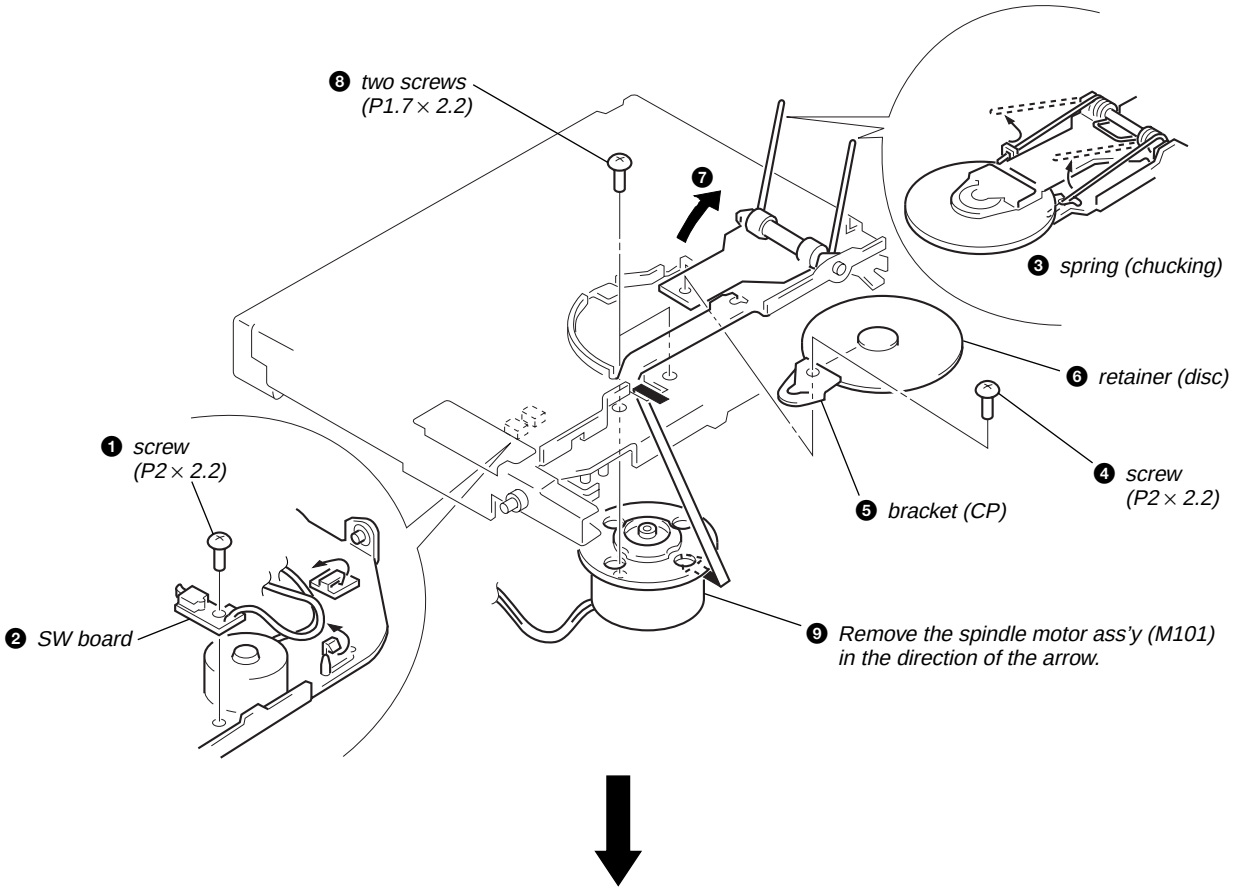
RF BOARD


❸ two screws (PS2 × 4)
❶ OP flexible board (CNJ11)
❸ two screws (PS2 × 4)
❹
❼ RF board
❺ connector (CNP53)
❷ Break the soldering of motor (M102) lead.
❻ Break the soldering of lead.

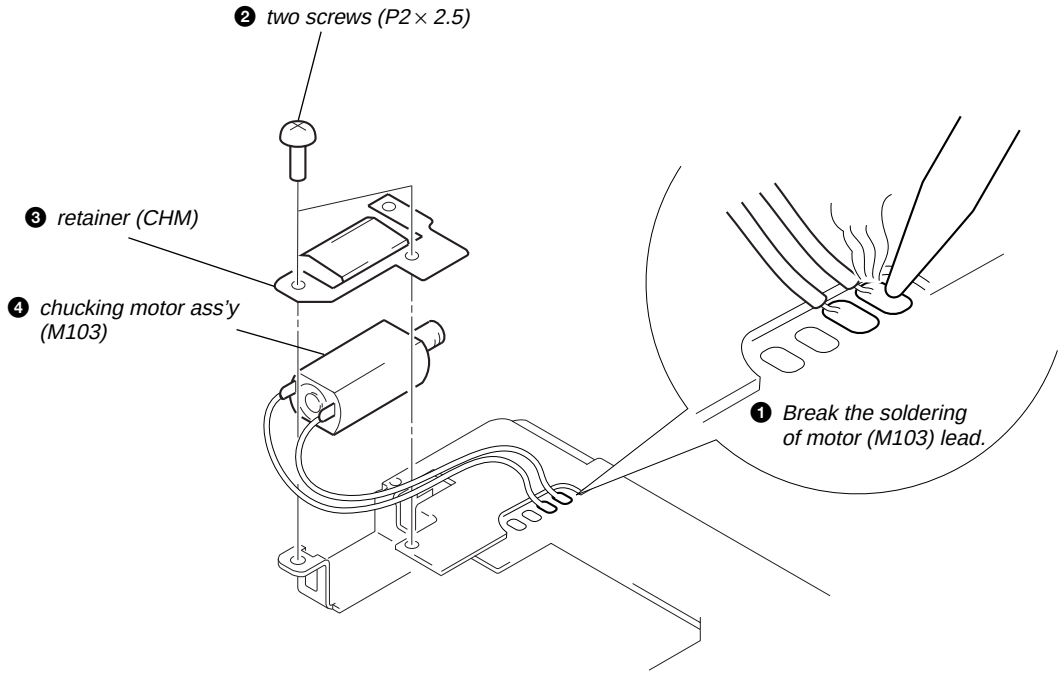
SLED MOTOR ASS'Y (M102) , OPTICAL PICK-UP (KSS-521A/J2N)


❶ two screws (ESCUTCHEON)
❷ sled motor ass'y (M102)
❸ optical pick-up (KSS-521A/J2N)
❹ Turn at the direction of the arrow, then remove shaft (sled) ass'y

SW BOARD, SPINDLE MOTOR ASS'Y (M101)


❽ two screws (P1.7× 2.2)
❼
❸ spring (chucking)
❻ retainer (disc)
❹ screw (P2× 2.2)
❺ bracket (CP)
❶ screw (P2× 2.2)
❷ SW board
❾ Remove the spindle motor ass'y (M101) in the direction of the arrow.

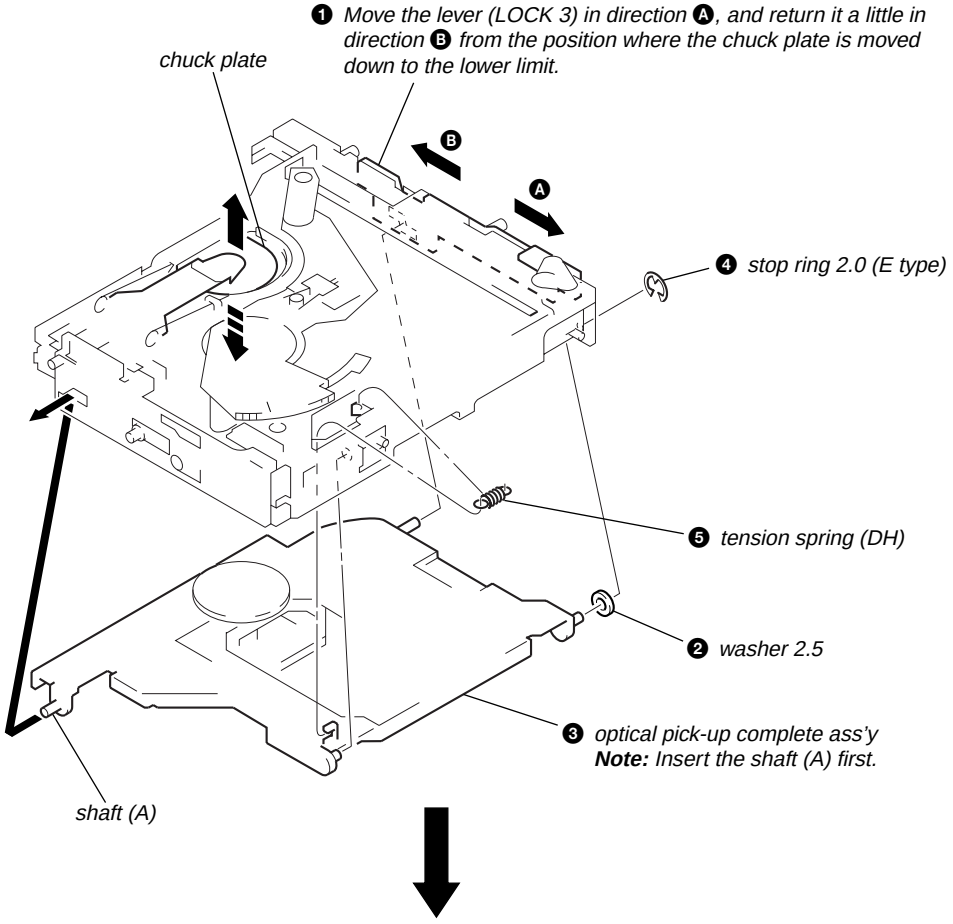
CHUCKING MOTOR ASS'Y (M103)



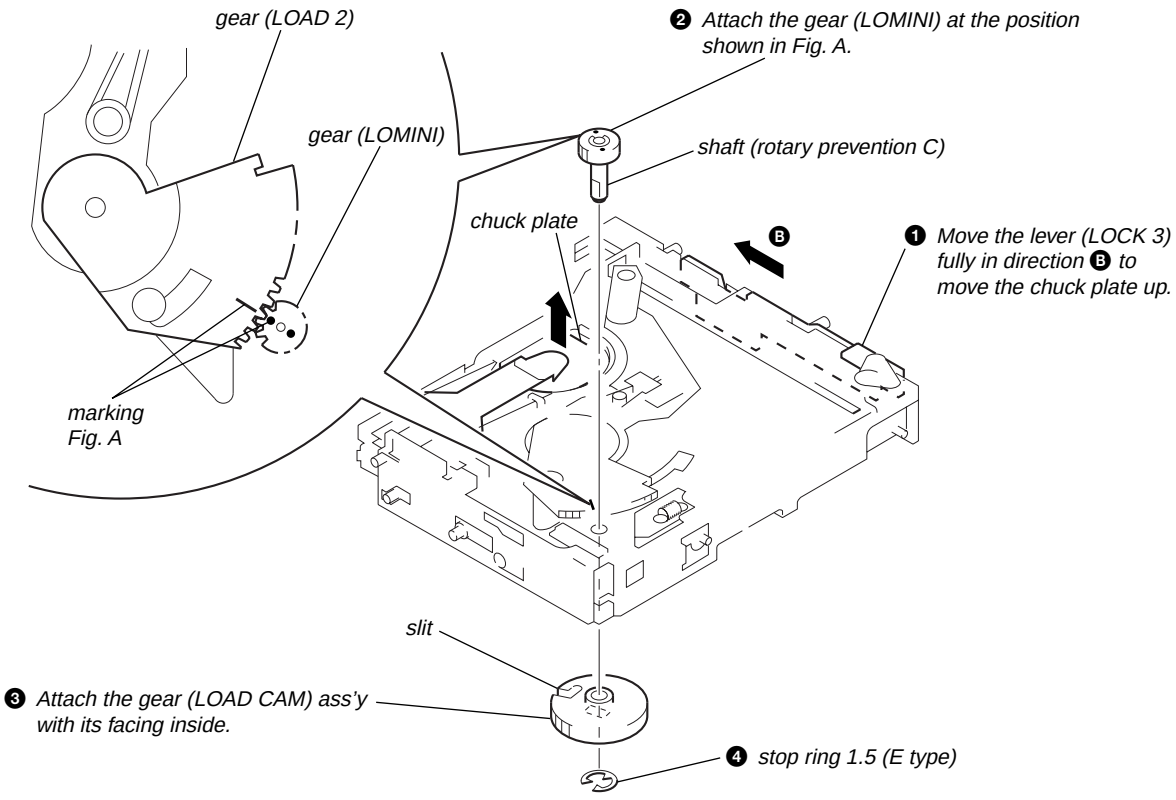
SECTION 4
MECHANISM DECK ASSEMBLY

Note: Follow the assembly procedure in the numerical order given.

OPTICAL PICK-UP COMPLETE ASS'Y

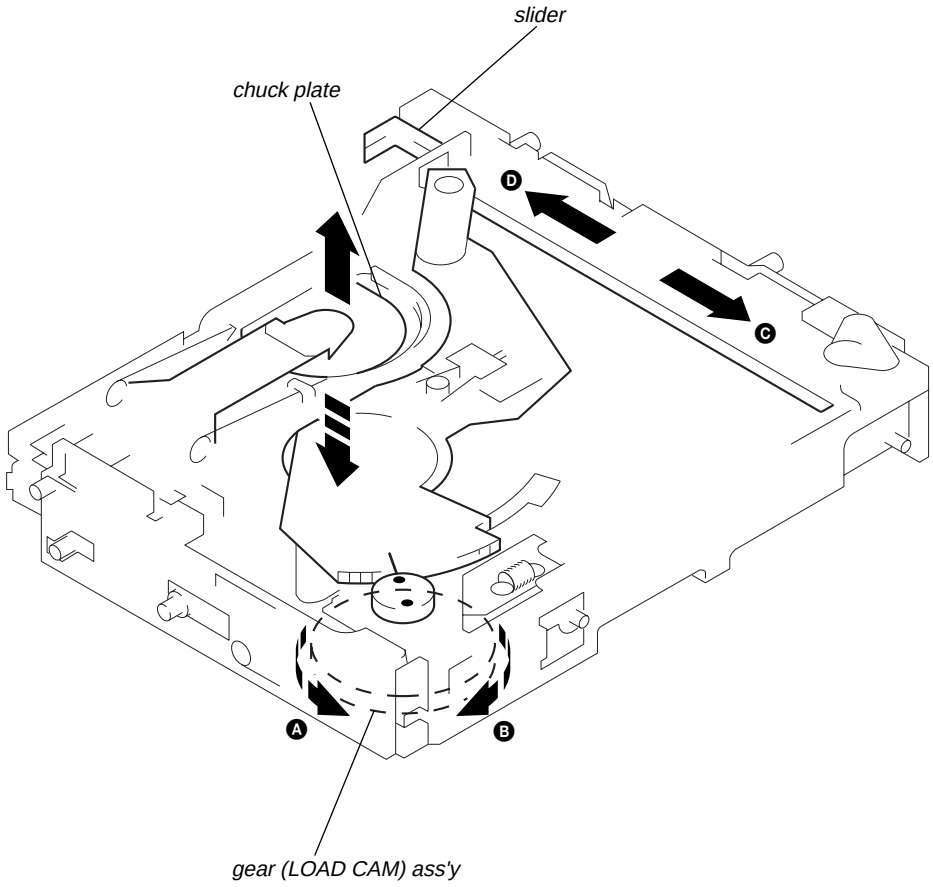

❶ Move the lever (LOCK 3) in direction Ⓐ, and return it a little in direction Ⓑ from the position where the chuck plate is moved down to the lower limit.
chuck plate
Ⓑ
Ⓐ
❹ stop ring 2.0 (E type)
❺ tension spring (DH)
❷ washer 2.5
❸ optical pick-up complete ass'y
Note: Insert the shaft (A) first.
shaft (A)

GEAR (LOMINI) / (LOAD CAM) ASS'Y


gear (LOAD 2)
gear (LOMINI)
marking
Fig. A
❷ Attach the gear (LOMINI) at the position shown in Fig. A.
shaft (rotary prevention C)
chuck plate
Ⓑ
❶ Move the lever (LOCK 3) fully in direction Ⓑ to move the chuck plate up.
slit
❸ Attach the gear (LOAD CAM) ass'y with its facing inside.
❹ stop ring 1.5 (E type)

OPERATION CHECK

❶ *Confirm that the slider moves in direction Ⓒ to move down the chuck plate if the gear (LOAD CAM) is rotated in direction Ⓐ or the chuck plate moves up and the slider moves in direction Ⓓ if the gear is rotated in direction Ⓑ.*

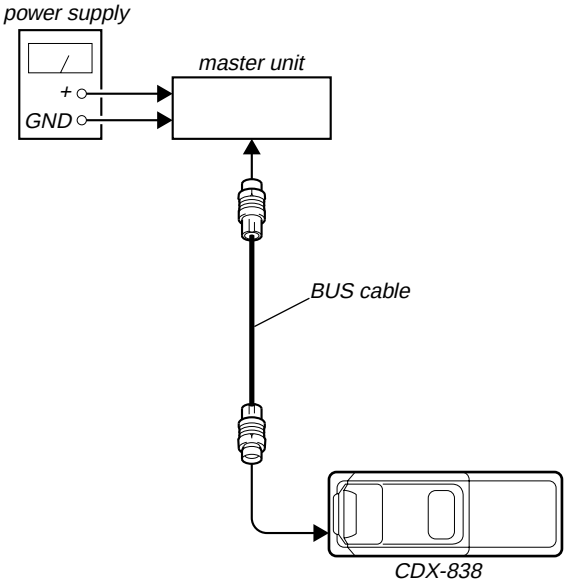


SECTION 5
MECHANICAL ADJUSTMENTS

• Elevator Height (Address) Adjustment

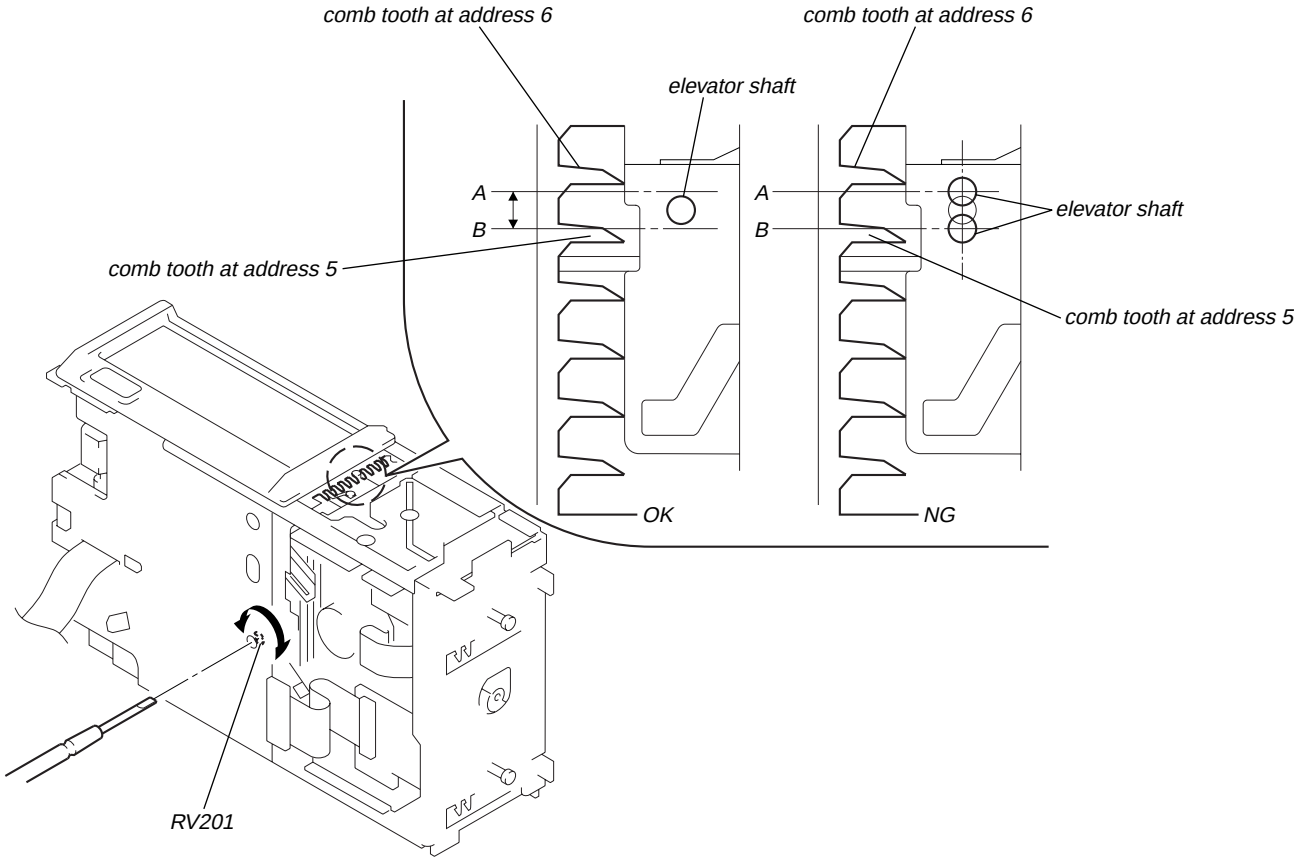
Note: This adjustments is necessary when the system controller (IC201), variable resistor (RV201), slider (R), slider (L), or chassis (ELV) was replaced for any repair.

Connection:



Adjustment Method:

1. Connect this set to the master unit (e.g. MDX-C7970/C7970R), load a disc magazine, and place the set vertically as shown below.
2. Connect the regulated power supply to the master unit, and turn the power on.
3. Press the DISC button on the master unit and select DISC 5.
4. At this time, if the elevator shaft does not position between comb teeth A and B at addresses 5 and 6 as shown below, adjust the following.
5. Press repeatedly the DISC + and – buttons on the master unit so that the elevator shaft moves from address 6 to address 5, or from 5 to 6. At this time, adjust RV201 on the main board so that the elevator shaft positions smoothly between comb teeth A and B.
6. Further, place the set horizontally and make same adjustment as mentioned above.
7. After adjustment at addresses 5 to 6 is finished, check all operations from addresses 1 to 10 with the set placed vertically and horizontally respectively to confirm that the elevator shaft positions in a range between comb teeth A to B.

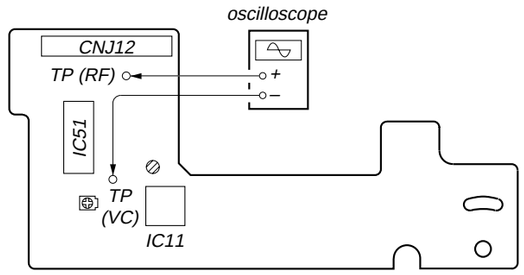


SECTION 6
ELECTRICAL ADJUSTMENTS

Note:
1. Perform adjustments as given.
2. Power supply voltage: DC14.4 V (more than 3A).

• FOCUS BIAS CHECK

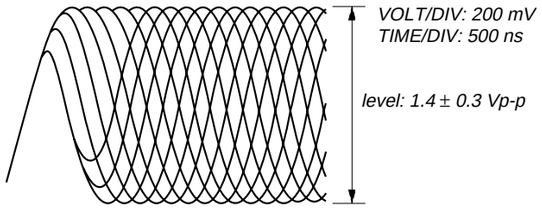
– RF BOARD (Conductor Side) –



Procedure:
1. Connect the oscilloscope to TP (RF) and TP (VC) on the RF board.
2. Put the set into play mode by loading the disc.
3. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

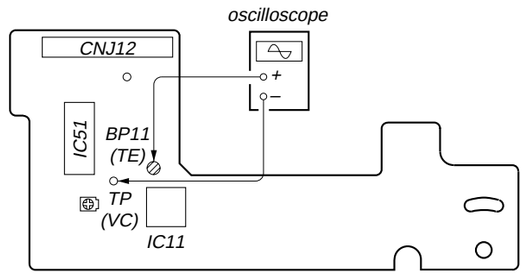
Note:
Clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.

RF signal waveform



• TRACKING OFFSET CHECK

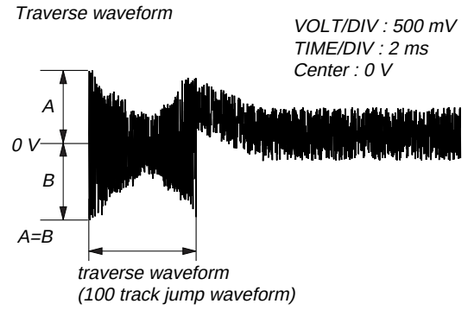
– RF BOARD (Conductor Side) –



Procedure:
1. Connect the oscilloscope to BP11 (TE) and TP (VC) on the RF board.
2. Put the set into play mode by loading the disc.
3. Press the I◀◀ AMS ▶▶I button, and check the traverse waveform*.
4. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0 V dc, and check this level.

* Traverse waveform: This is the tracking error wave form appears when crossing the track.

Traverse waveform

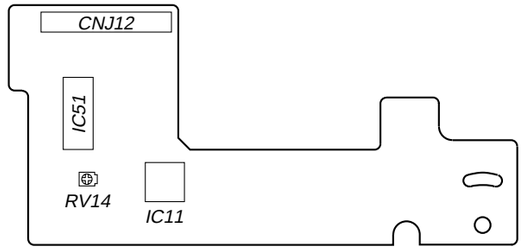


traverse waveform
(100 track jump waveform)

• FOCUS GAIN ADJUSTMENT (COARSE ADJUSTMENT)

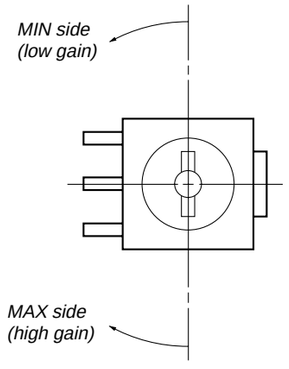
This adjustment is to be performed when replacing the following parts.
- Optical Pick-up Block
- RV14

– RF BOARD (Conductor Side) –



Procedure:
1. Set RV14 (RF board) to the standard position.
2. Check that there is not an abnormal amount of operation noise (white noise) from the 2-axis devise. If there is, turn RV14 slightly clockwise.

– RF BOARD (Conductor Side) –

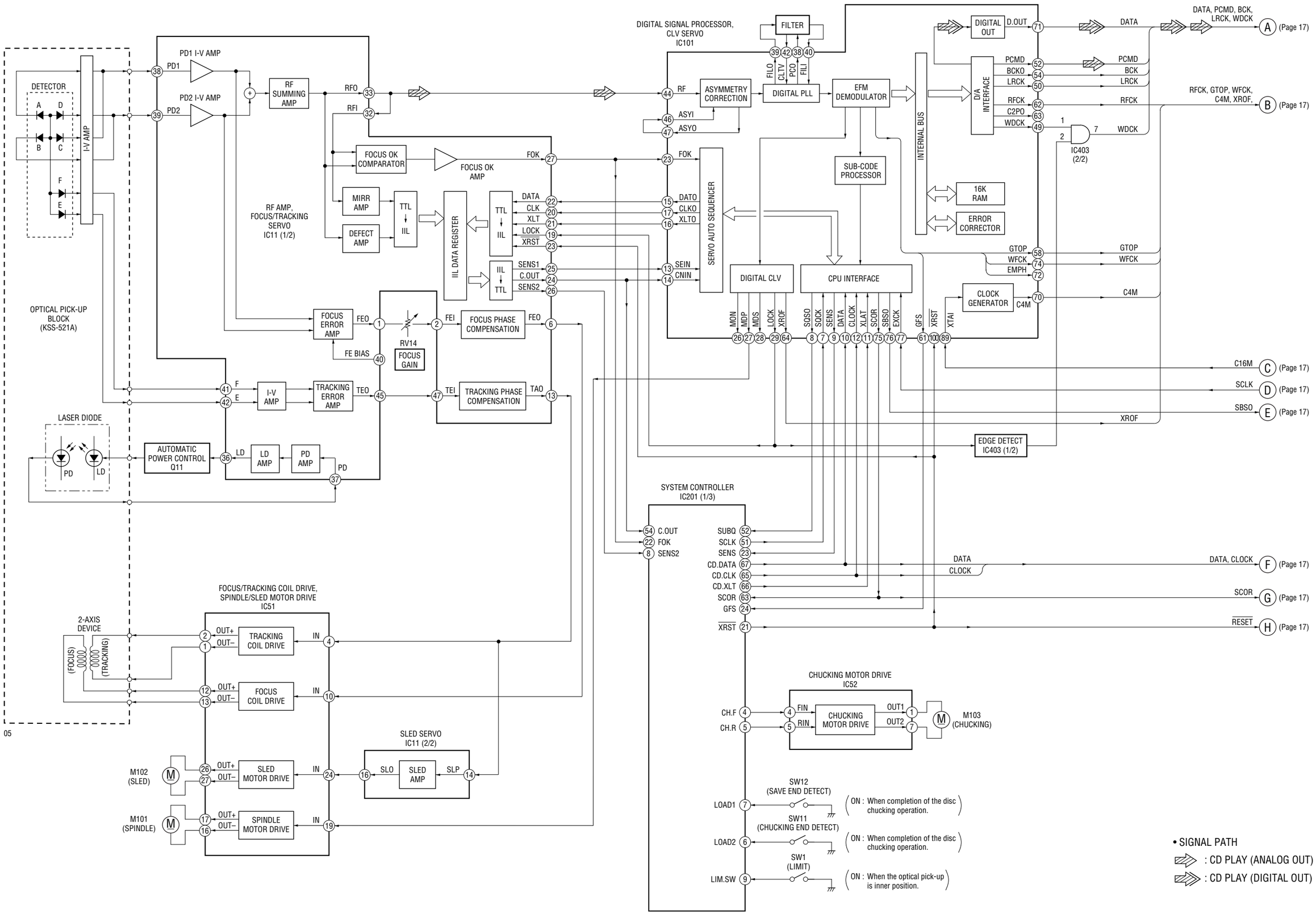


RV14 standard position

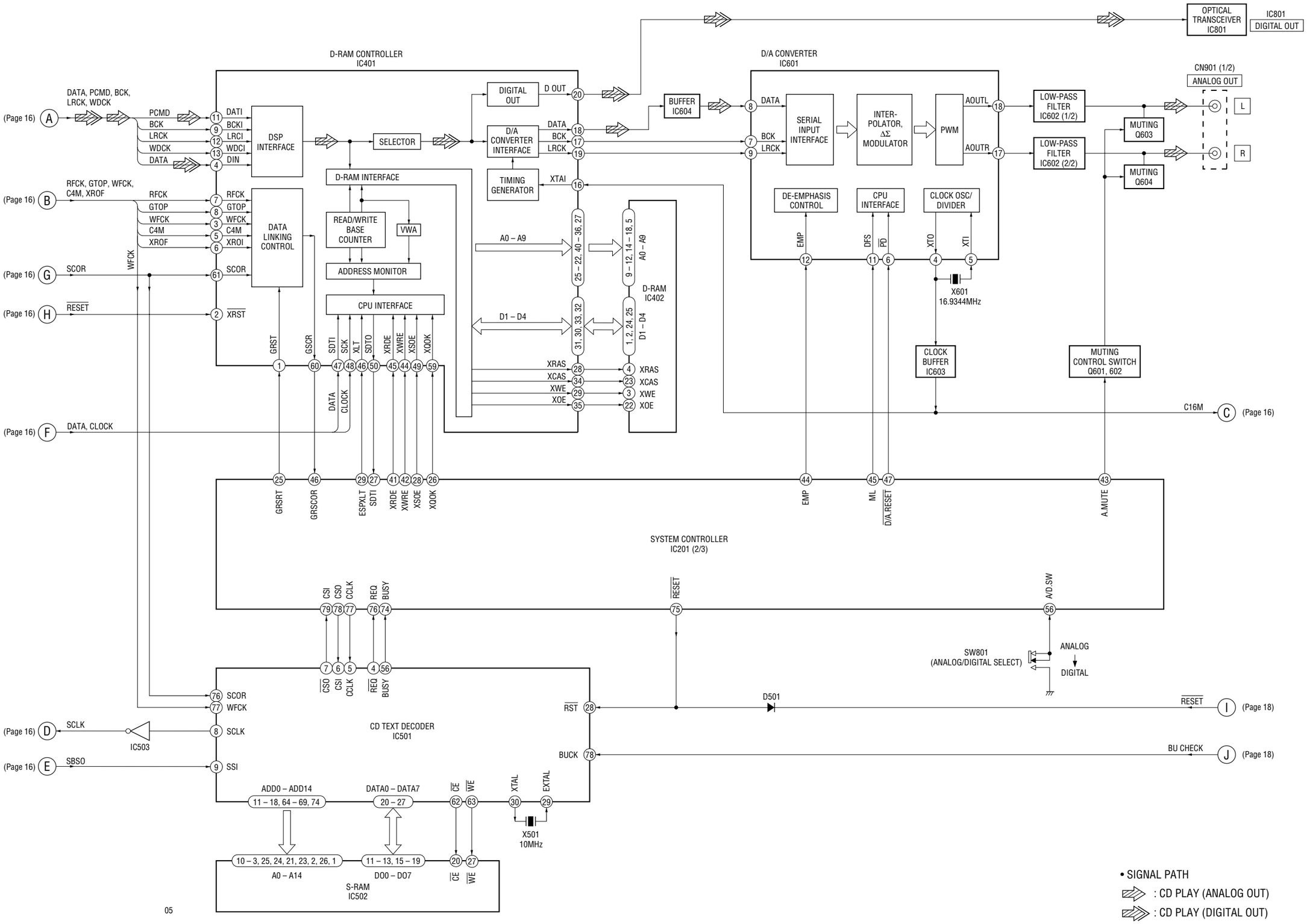
- **When gain is lowered...**
  The set does not play because of no focus operation.
- **When gain is highered...**
  Operation noise is heard due to a scratch or a dust, then operation will be unstable.

SECTION 7
DIAGRAMS

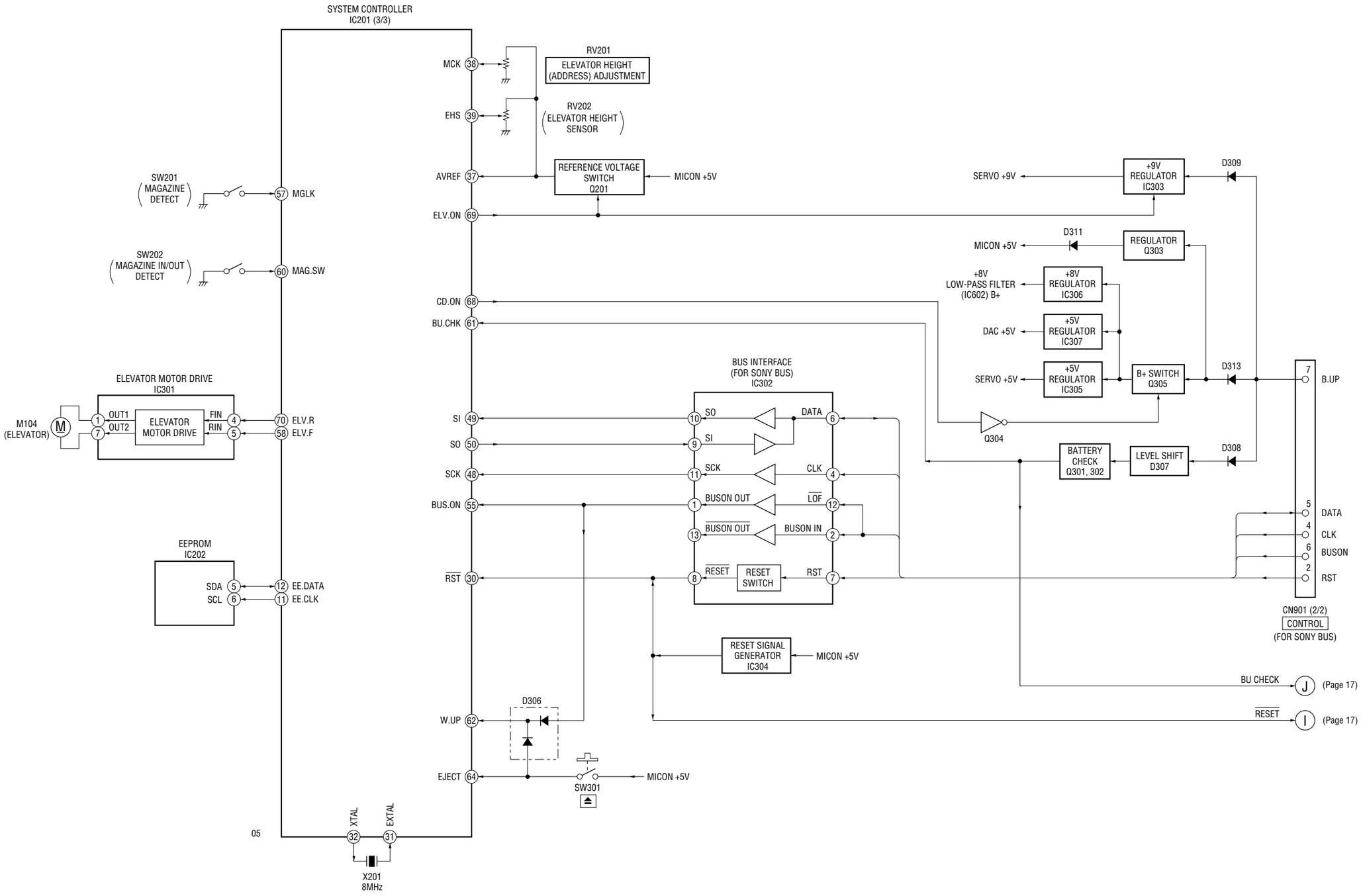
7-1. BLOCK DIAGRAM – SERVO Section –



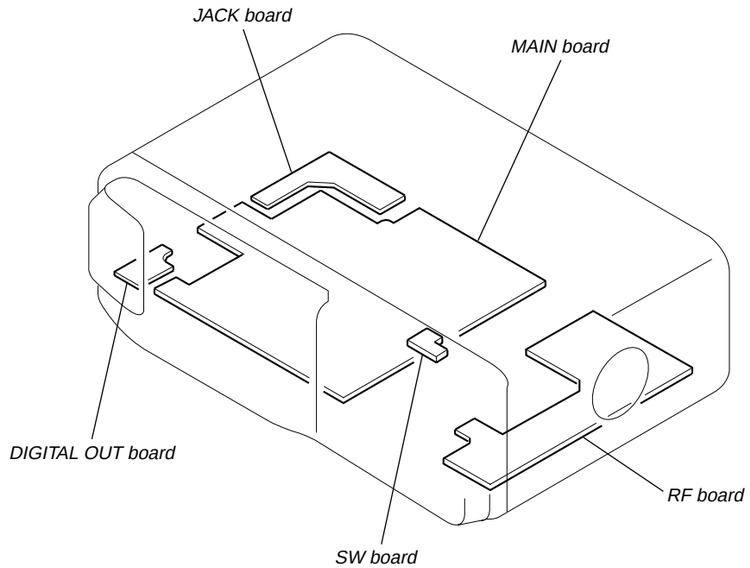
7-2. BLOCK DIAGRAM – MAIN Section –



7-3. BLOCK DIAGRAM – BUS CONTROL /POWER SUPPLY Section –



• **Circuit Boards Location**



7-4. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:
- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ● : Through hole.
- ▒▒▒ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

Note on Schematic Diagram:
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

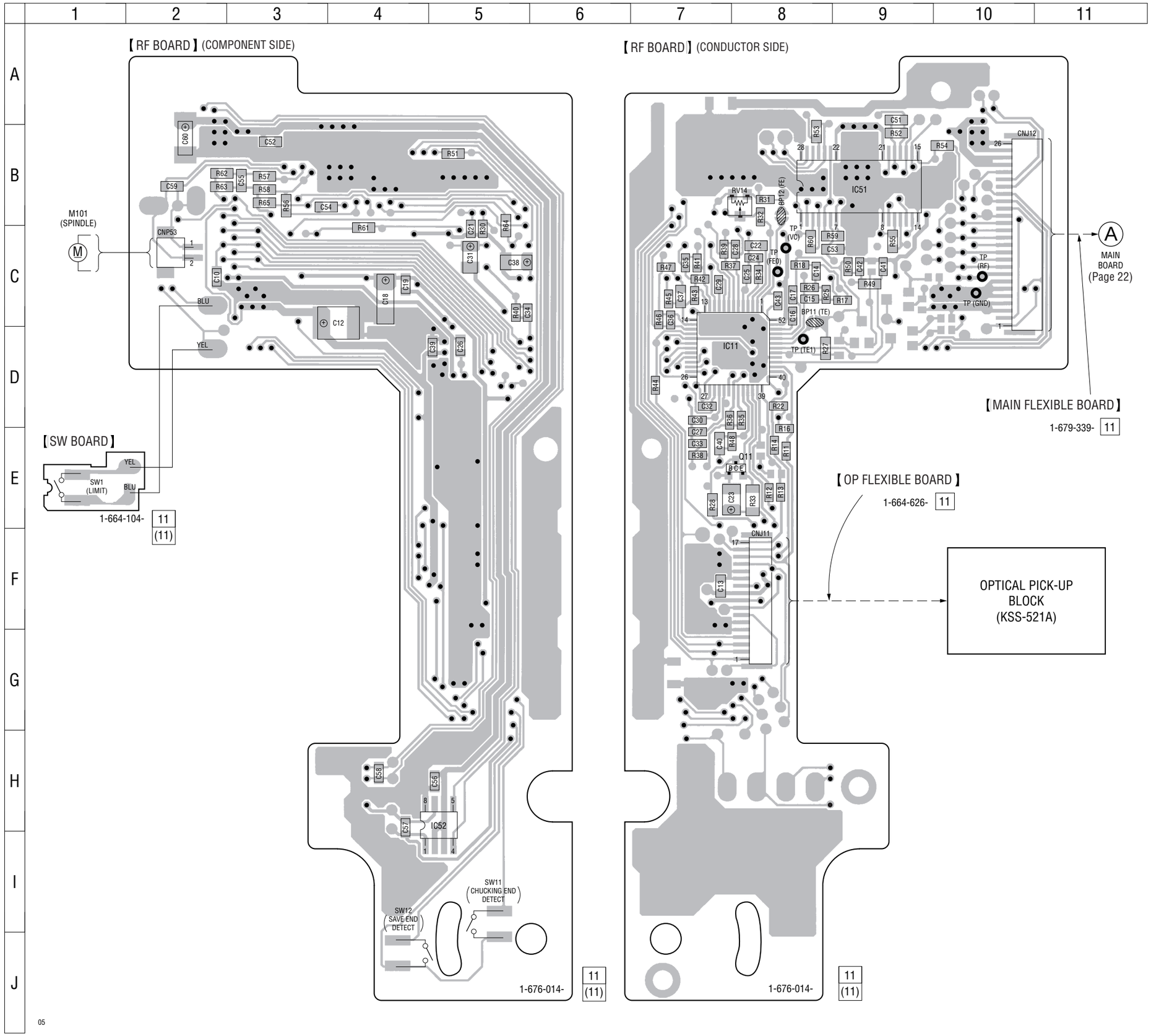
Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B+ Line.
- ▭ : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from CD changer controller.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD PLAY
  ✻ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD PLAY (ANALOG OUT)
  ⇨ : CD PLAY (DIGITAL OUT)

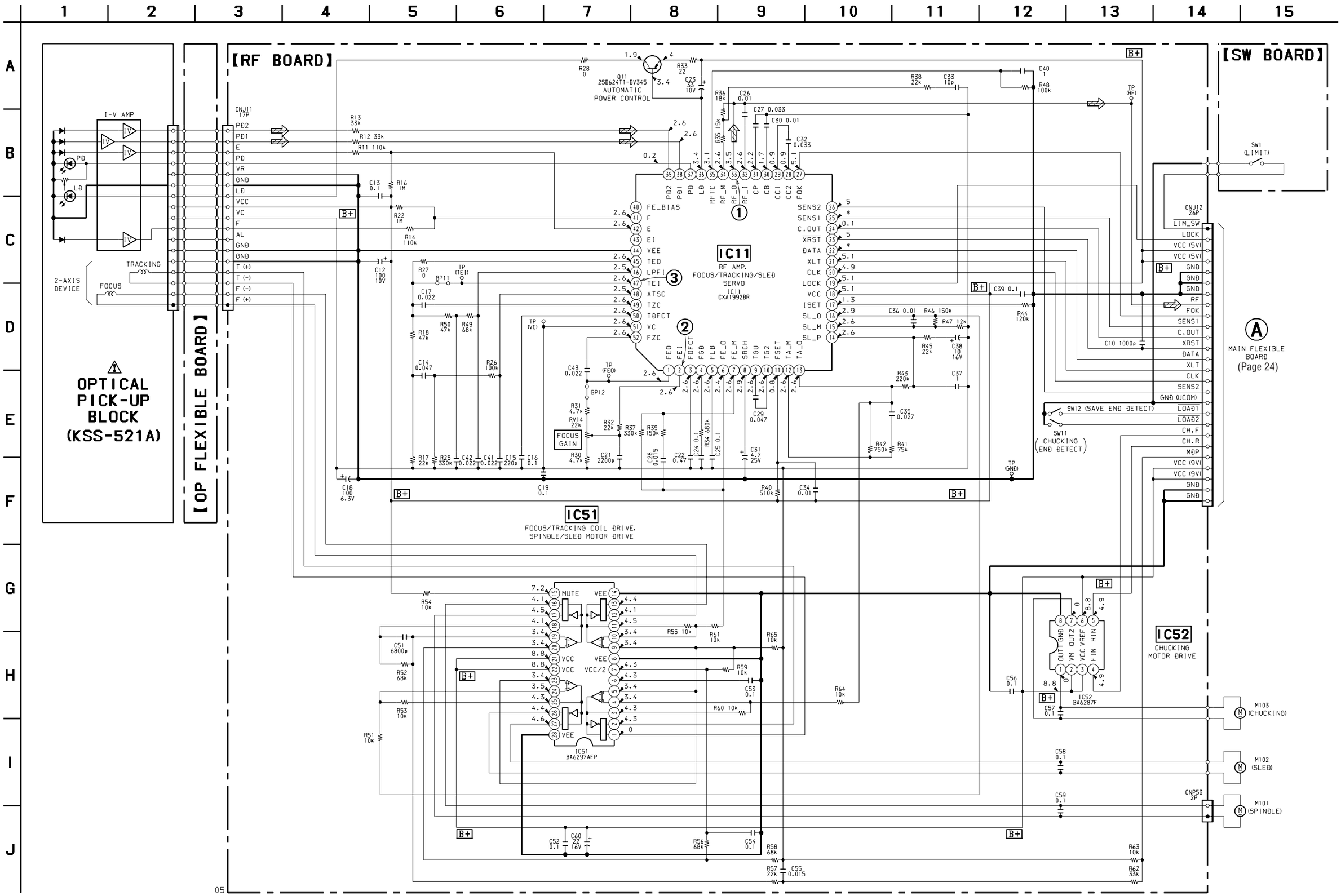
7-5. PRINTED WIRING BOARDS – RF/SW Boards – • See page 19 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location
IC11	D-7
IC51	B-9
IC52	H-4
Q11	E-8



7-6. SCHEMATIC DIAGRAM – RF/SW Boards – • See page 27 for Waveforms. • See page 30 for IC Block Diagrams.

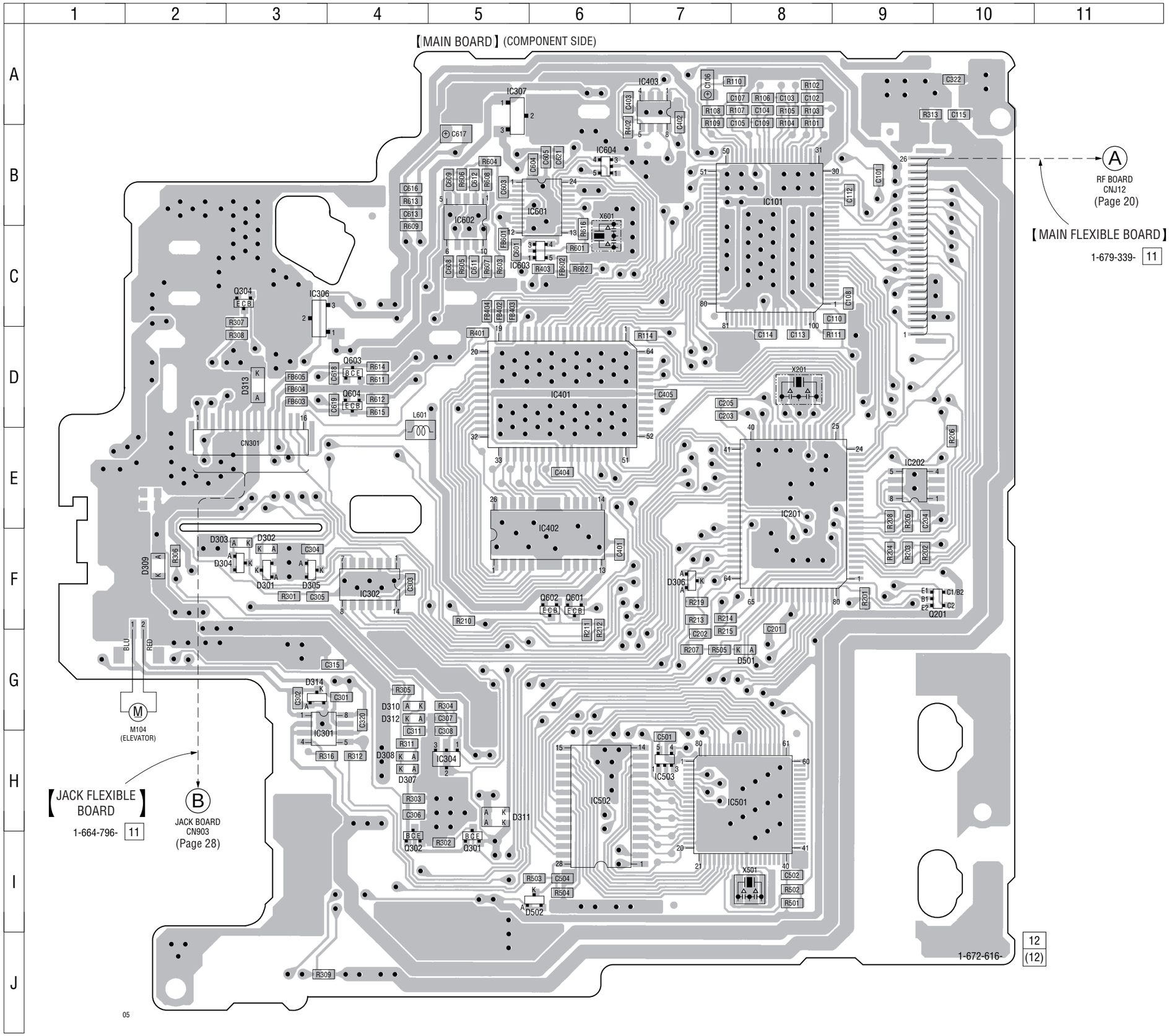


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

7-7. PRINTED WIRING BOARDS – MAIN Board (Component Side) – • See page 19 for Circuit Boards Location.

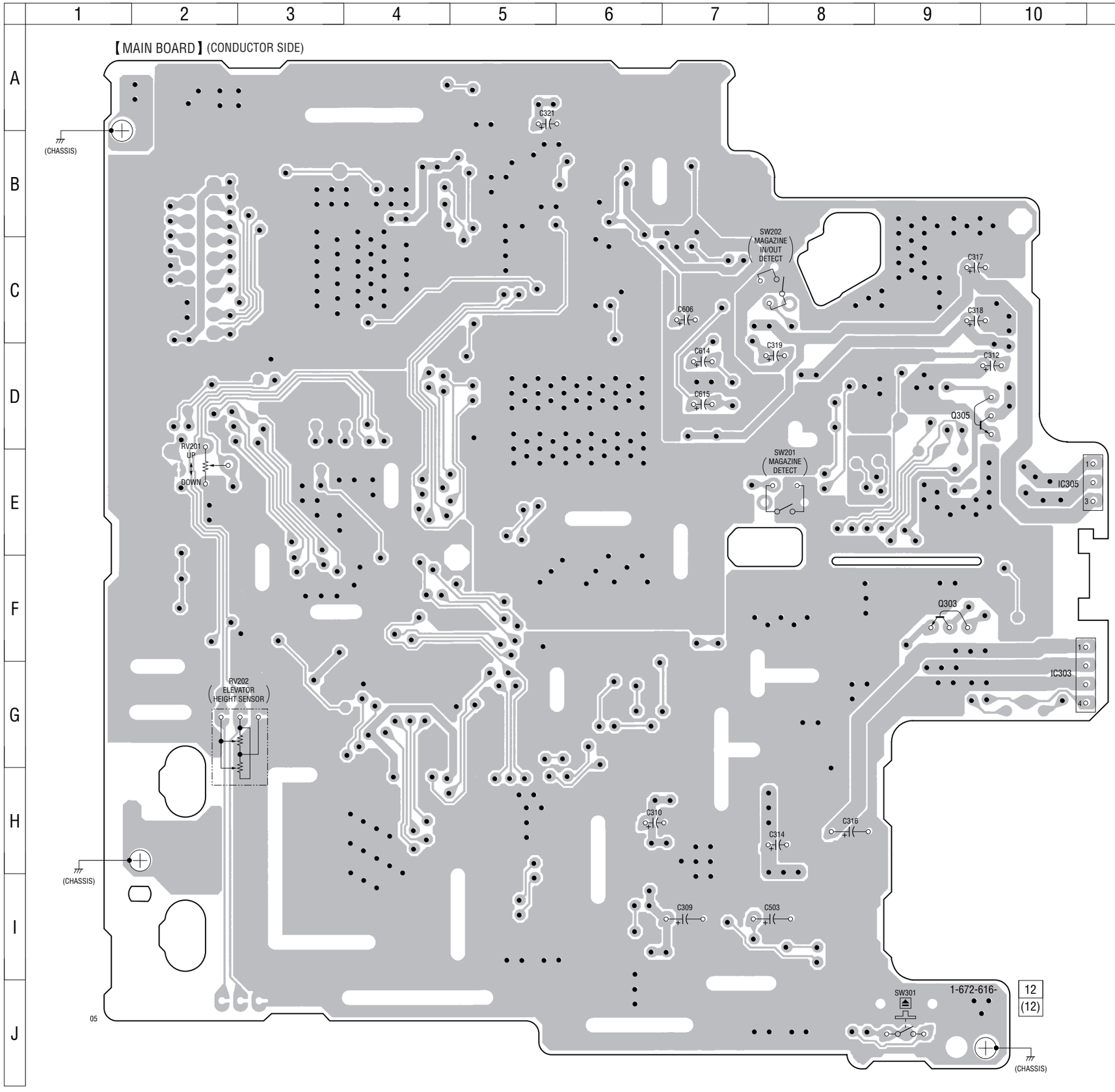
• **Semiconductor Location (Component Side)**

Ref. No.	Location
D301	F-3
D302	F-3
D303	F-3
D304	F-3
D305	F-3
D306	F-7
D307	H-4
D308	H-4
D309	F-2
D310	G-4
D311	H-5
D312	G-4
D313	D-3
D314	G-3
D501	G-8
D502	H-6
IC101	C-8
IC201	E-8
IC202	E-9
IC301	G-3
IC302	F-4
IC304	H-5
IC306	C-3
IC307	A-5
IC401	D-6
IC402	F-6
IC403	A-7
IC501	H-8
IC502	H-6
IC503	H-7
IC601	B-6
IC602	B-5
IC603	C-6
IC604	B-6
Q201	F-10
Q301	I-5
Q302	I-4
Q304	C-3
Q601	F-6
Q602	F-6
Q603	D-4
Q604	D-4



7-8. PRINTED WIRING BOARD – MAIN Board (Conductor Side) – • See page 19 for Circuit Boards Location.

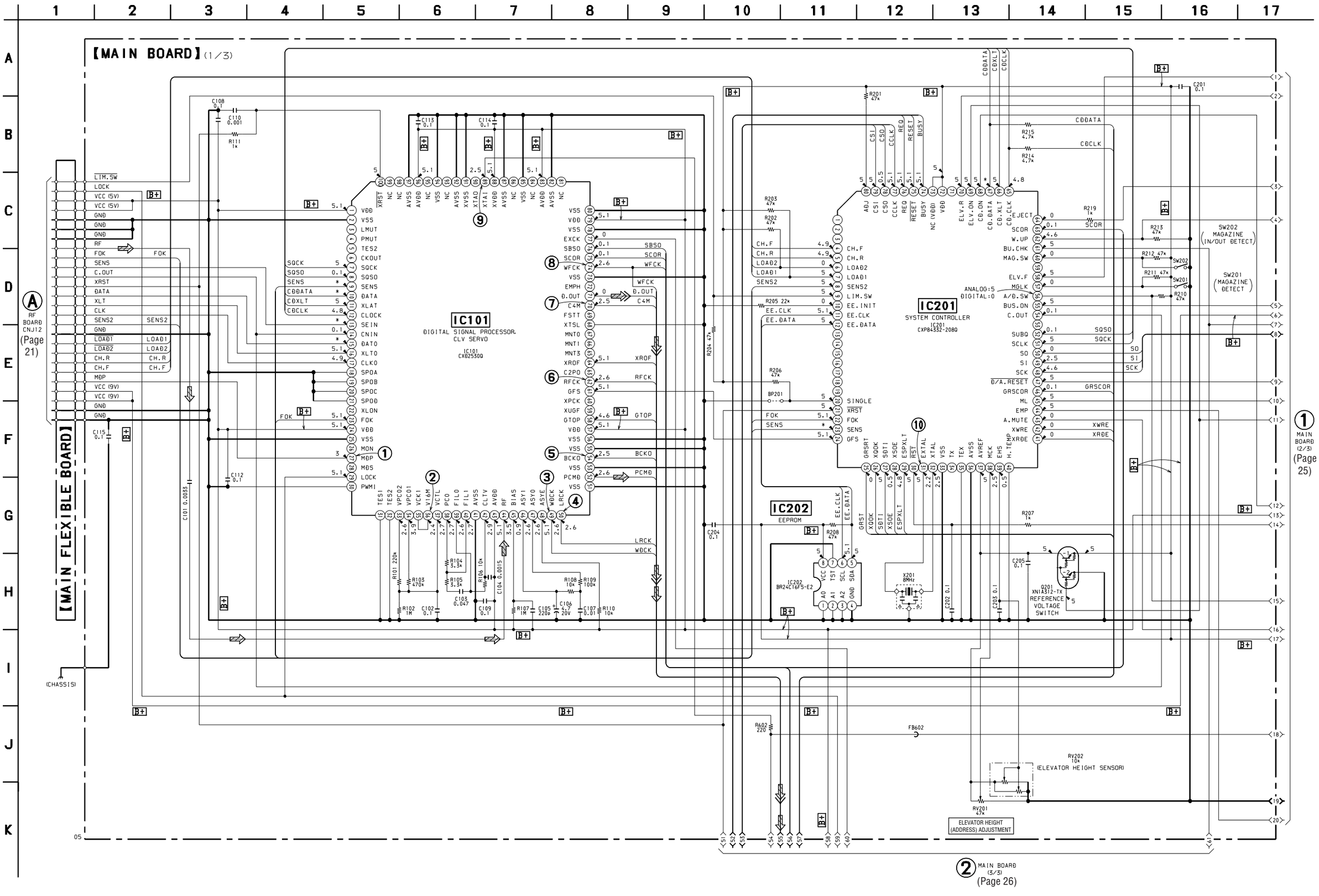
【MAIN BOARD】(CONDUCTOR SIDE)



• **Semiconductor Location (Conductor Side)**

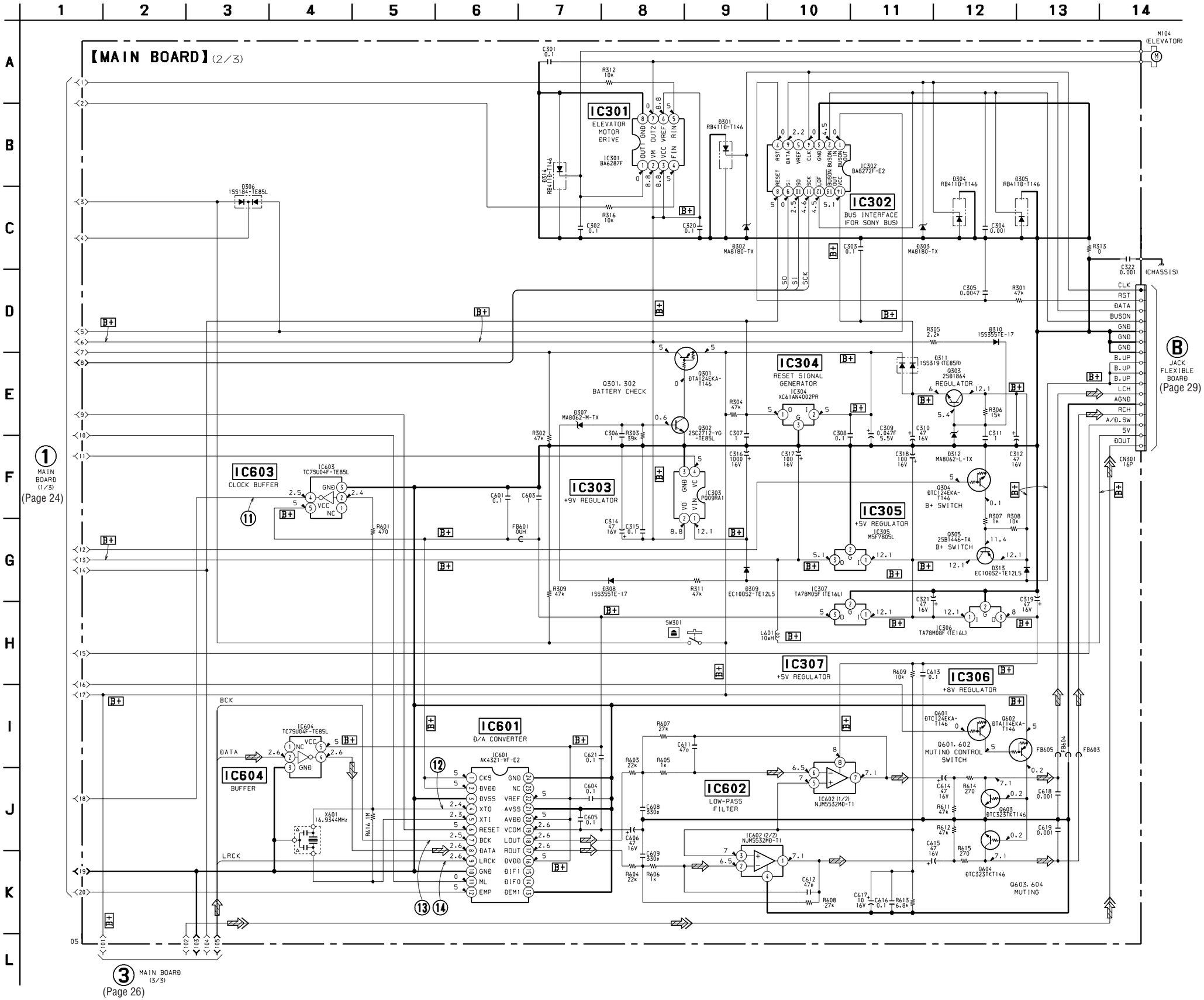
Ref. No.	Location
IC303	G-10
IC305	E-10
Q303	F-9
Q305	D-10

7-9. SCHEMATIC DIAGRAM – MAIN Board (1/3) – • See page 27 for Waveforms. • See page 30 for IC Block Diagrams.



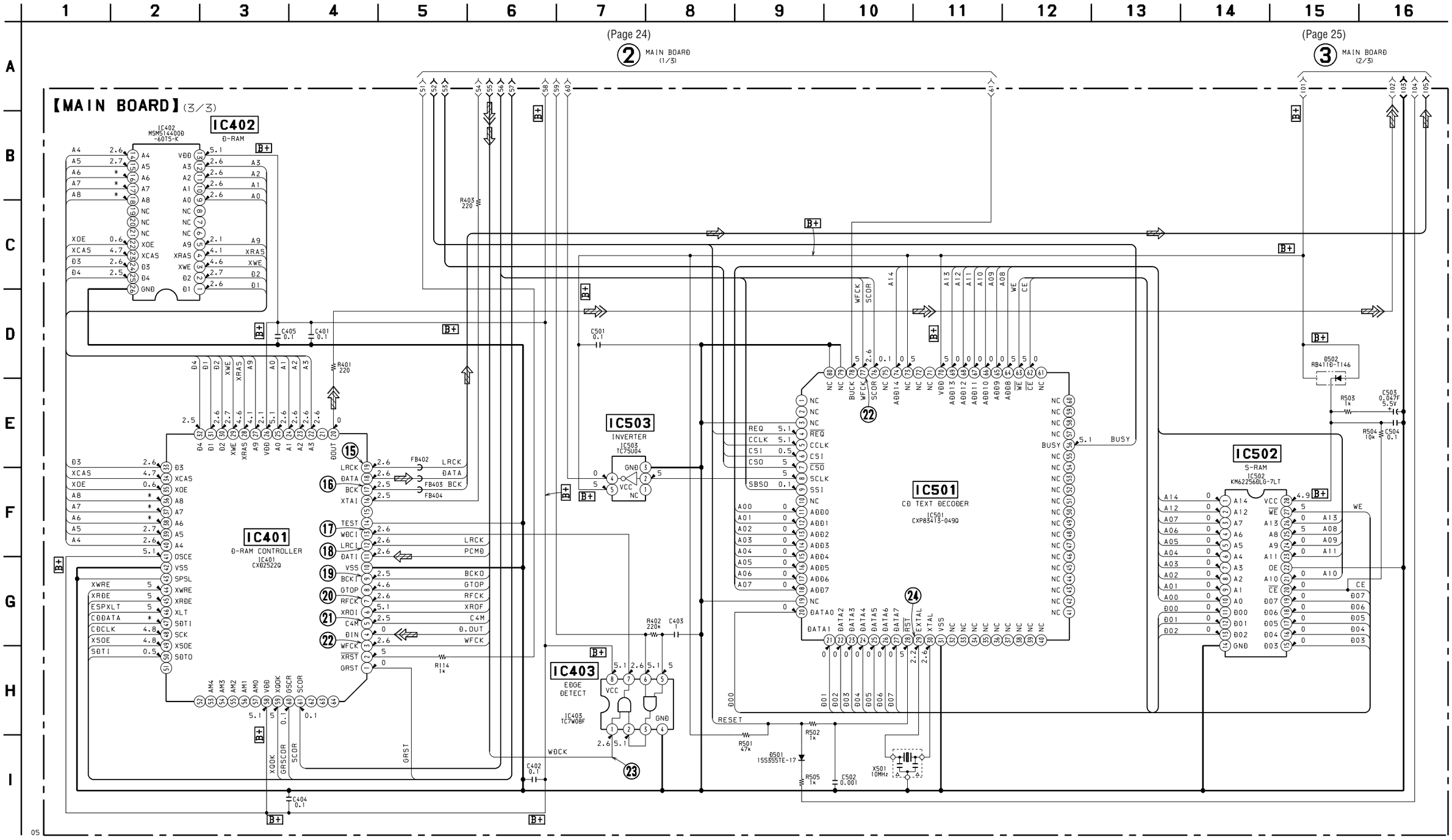
7-10. SCHEMATIC DIAGRAM – MAIN Board (2/3) –

• See page 27 for Waveforms. • See page 31 for IC Block Diagrams.



7-11. SCHEMATIC DIAGRAM – MAIN Board (3/3) –

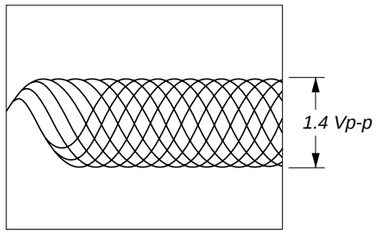
• See page 27 for Waveforms. • See page 31 for IC Block Diagrams.



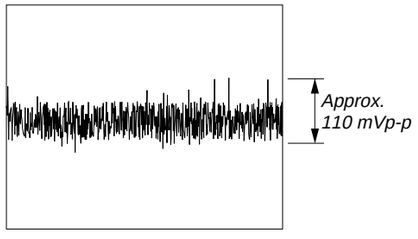
• **Waveforms**

– RF Board –

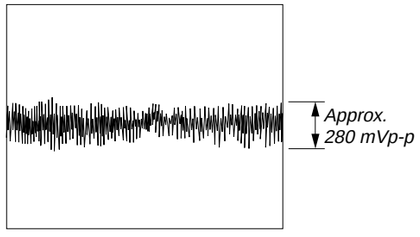
❶ IC11 ㉝ (RF O) (CD PLAY)
500 mV/DIV, 500 ns/DIV



❷ IC11 ② (FEI) (CD PLAY)
50 mV/DIV, 1 µs/DIV

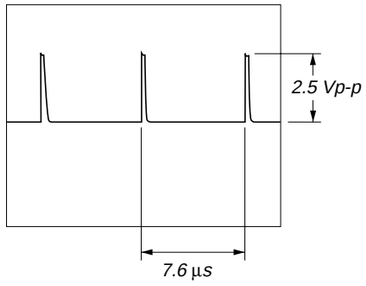


❸ IC11 ㊼ (TEI) (CD PLAY)
200 mV/DIV, 500 µs/DIV

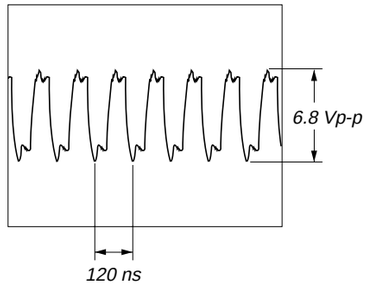


– MAIN Board (1/3) –

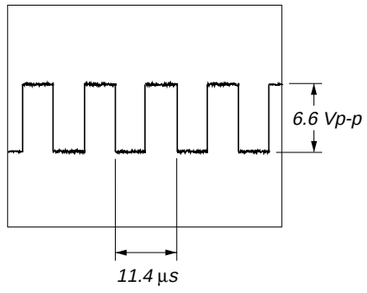
❶ IC101 ㉗ (MDP) (CD PLAY)



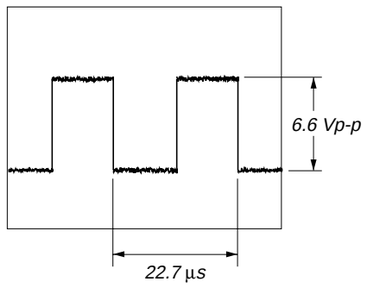
❷ IC101 ㊱ (V16M)



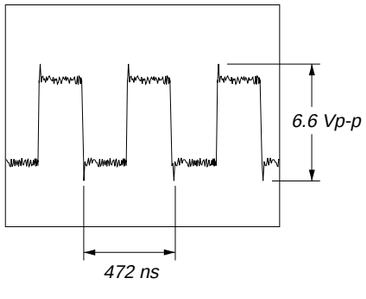
❸ IC101 ㊾ (WDCK)



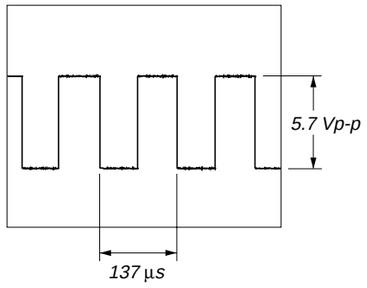
❹ IC101 ㊿ (LRCK)



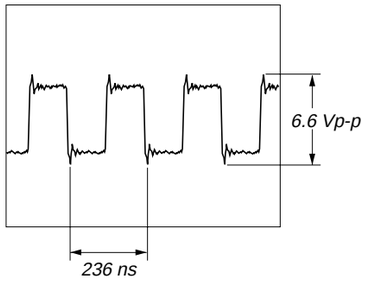
❺ IC101 ㊹ (BCKO)



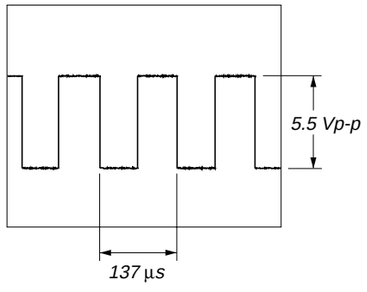
❻ IC101 ㊷ (RFCK)



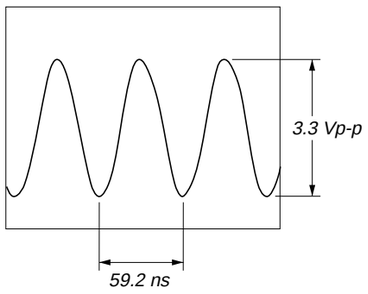
❼ IC101 ㊿ (C4M)



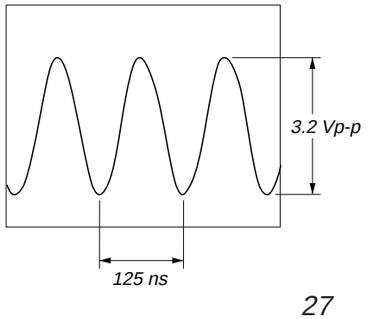
❽ IC101 ㊹ (WFCK)



❾ IC101 ㊽ (XTAI)

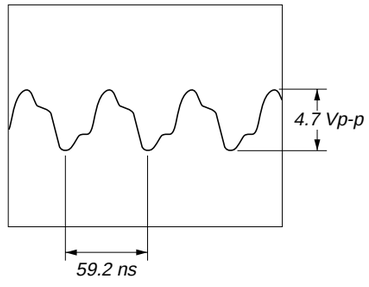


❿ IC201 ㉛ (EXTAL)

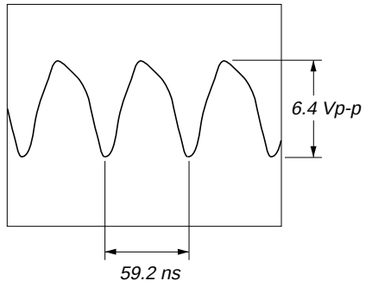


– MAIN Board (2/3) –

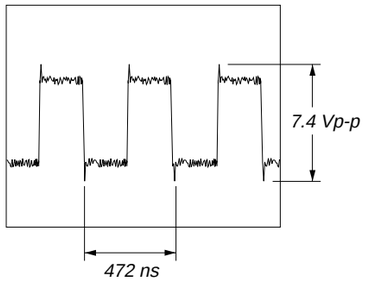
⓫ IC603 ④



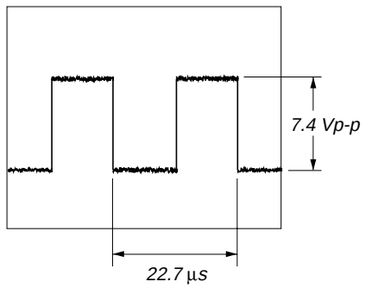
⓬ IC601 ④ (XTO)



⓭ IC601 ⑦ (BCK)

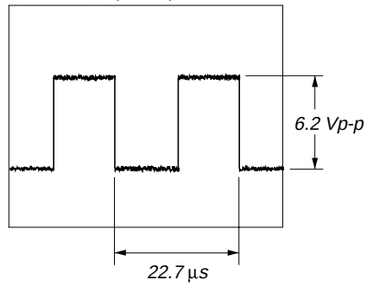


⓮ IC601 ⑨ (LRCK)

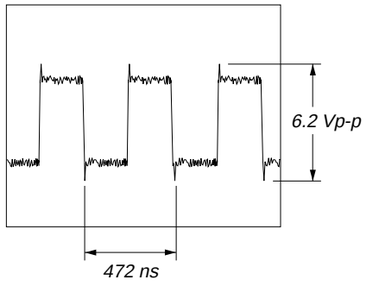


– MAIN Board (3/3) –

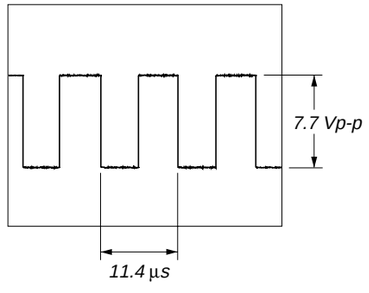
⓯ IC401 ⑲ (LRCK)



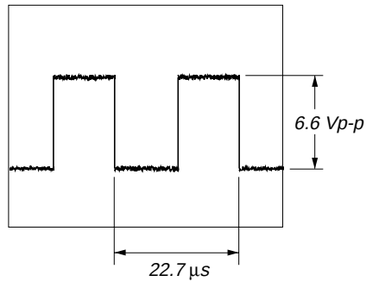
⓰ IC401 ⑰ (BCK)



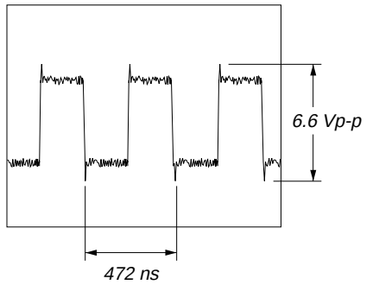
⓱ IC401 ⑬ (WDCI)



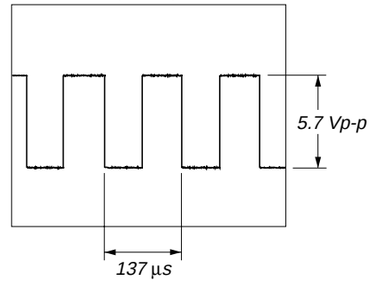
⓲ IC401 ⑫ (LRCI)



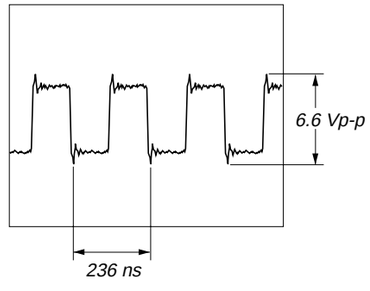
⓳ IC401 ⑨ (BCKI)



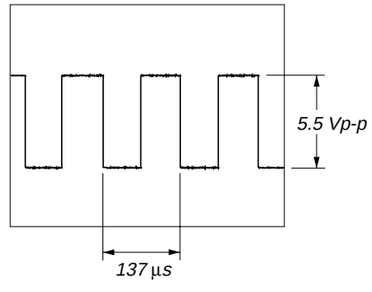
⓴ IC401 ⑦ (RFCK)



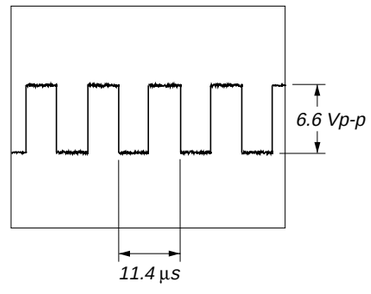
㉑ IC401 ⑤ (C4M)



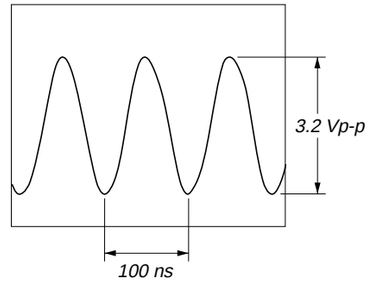
㉒ IC401 ③, IC501㊼ (WFCK)



㉓ IC403 ①

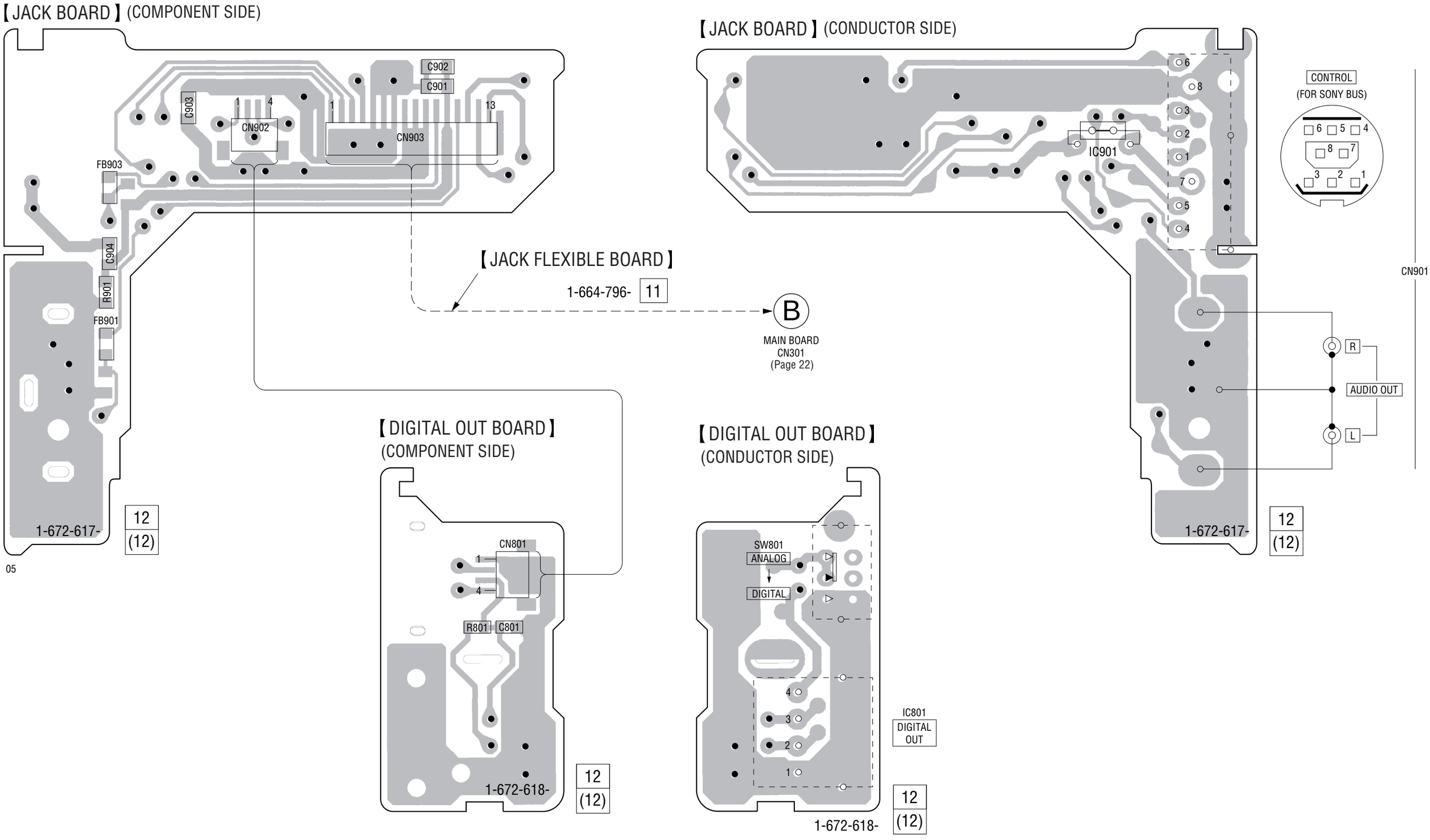


㉔ IC501 ㉙ (EXTAL)

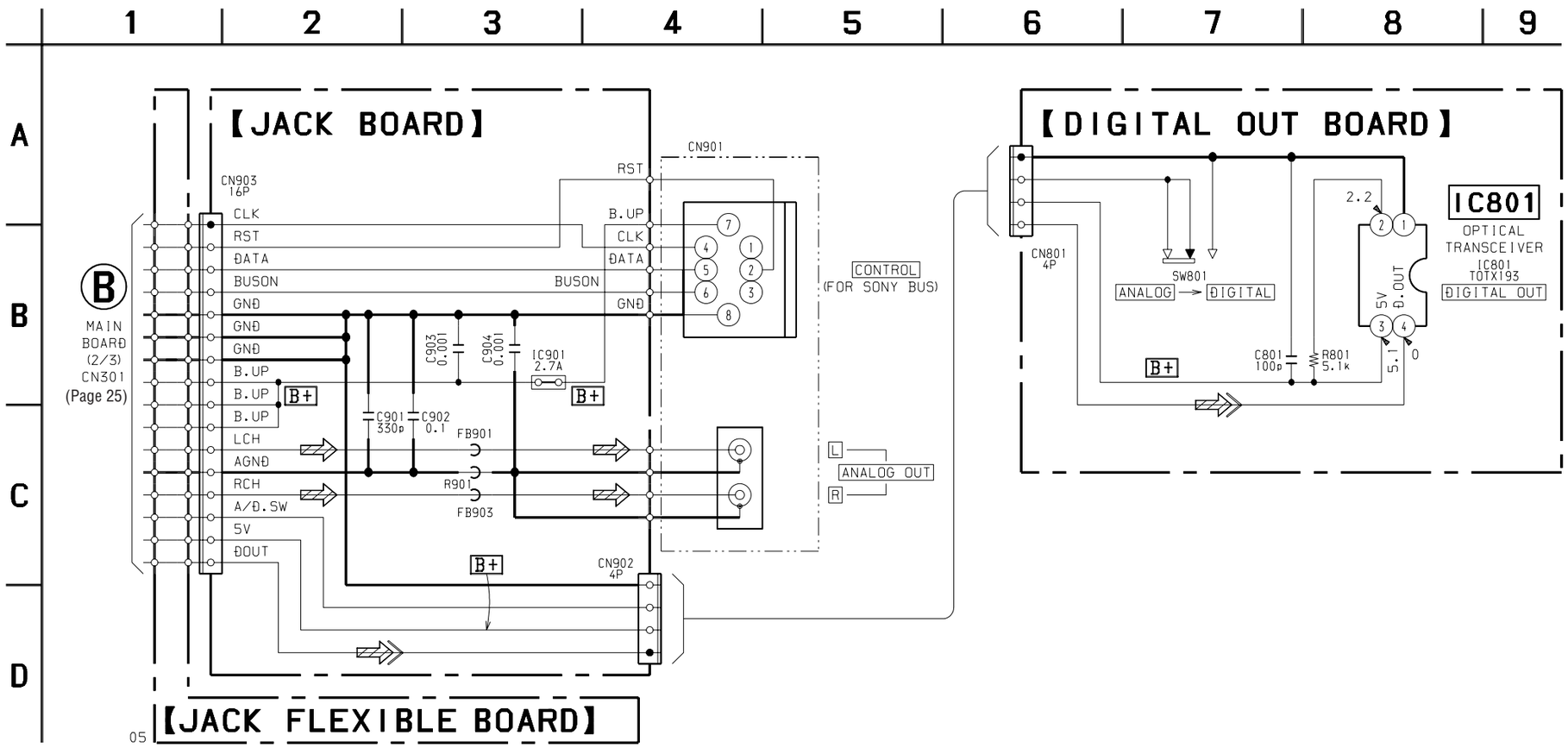


7-12. PRINTED WIRING BOARDS – DIGITAL OUT/JACK Boards –

• See page 19 for Circuit Boards Location.

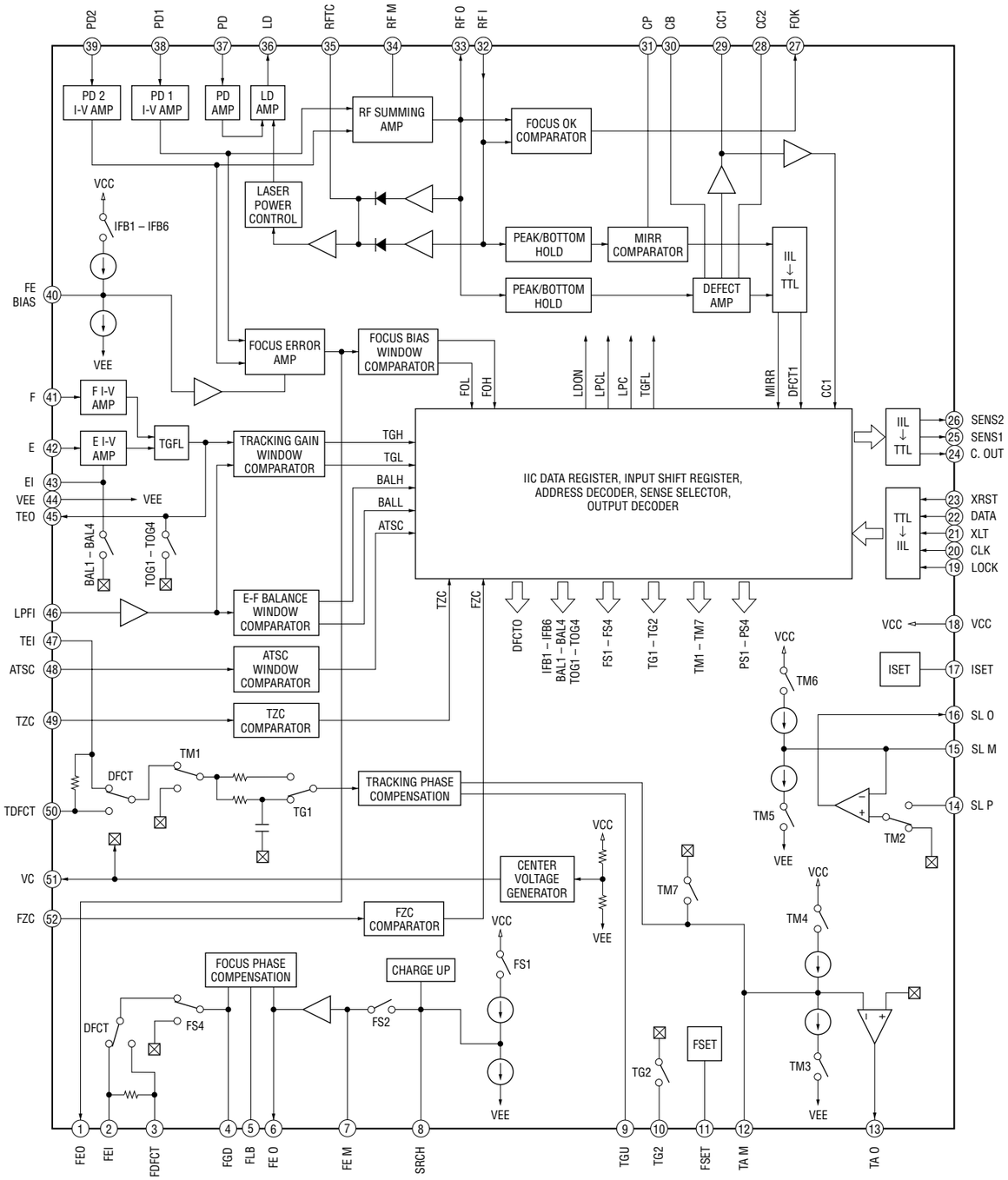


7-13. SCHEMATIC DIAGRAM – DIGITAL OUT/JACK Boards –

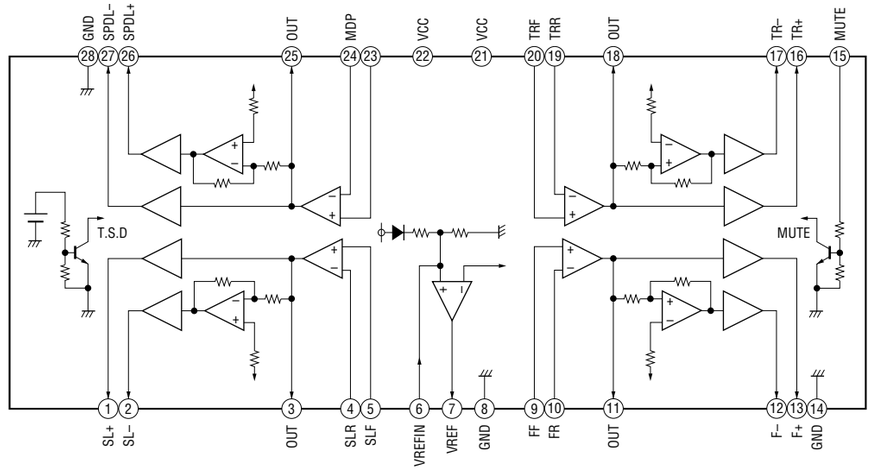


• **IC Block Diagrams**
– RF Board –

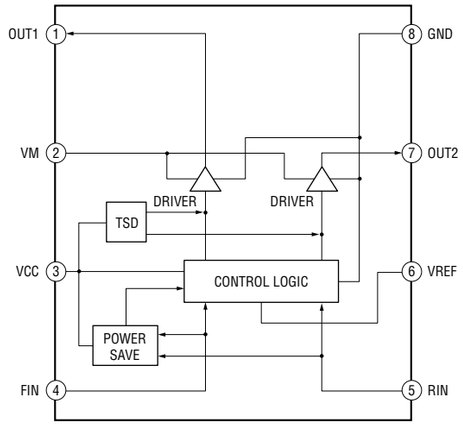
IC11 CXA1992BR



IC51 BA6297AFP

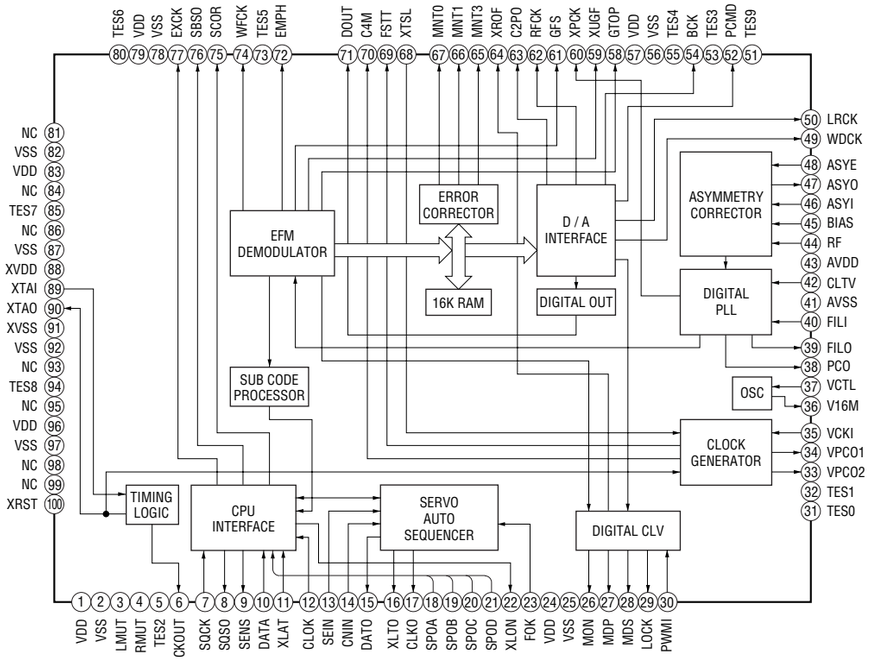


IC52 BA6287F

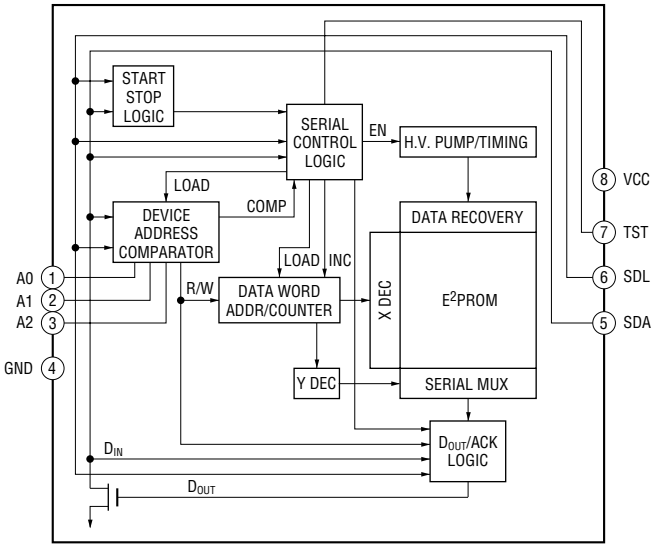


– MAIN Board –

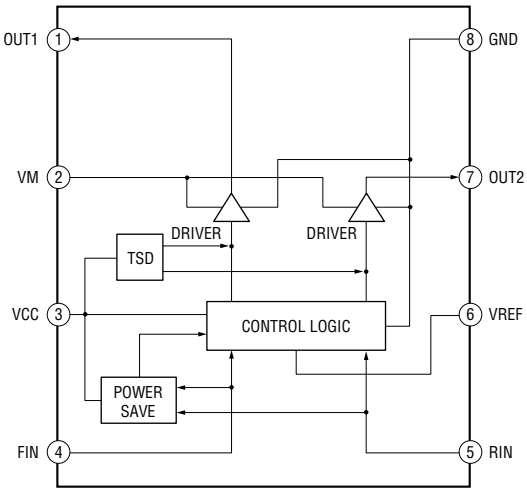
IC101 CXD2530Q



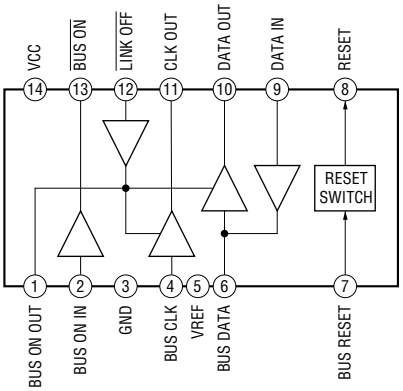
IC202 BR24C16FJ-E2



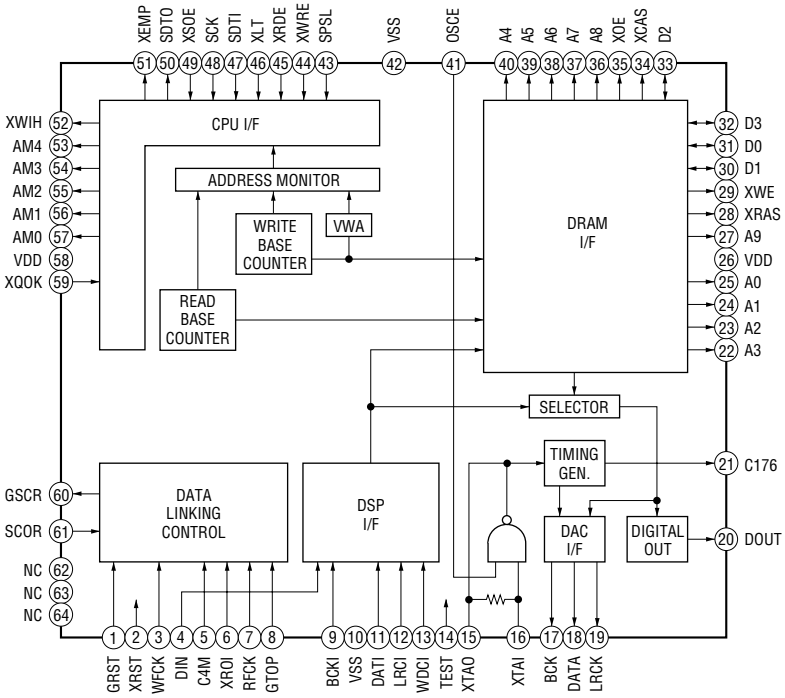
IC301 BA6287F



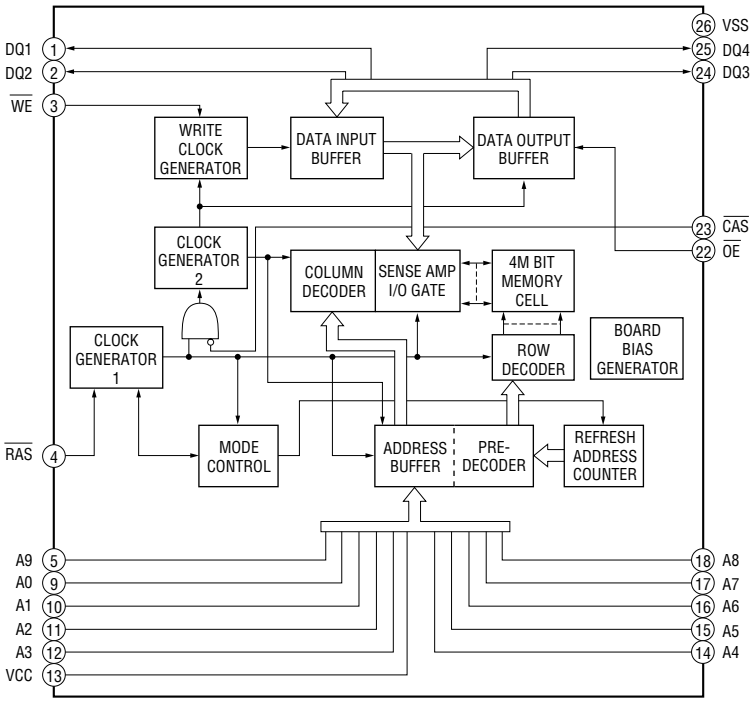
IC302 BA8272F-E2



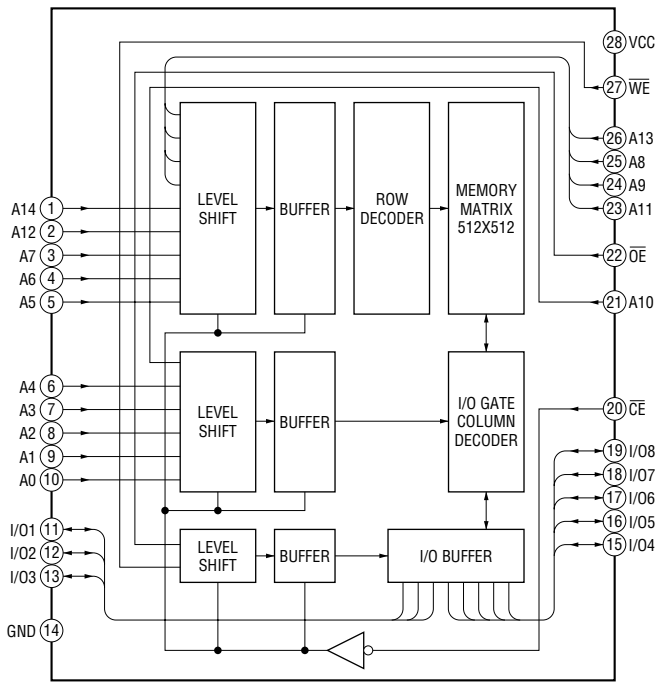
IC401 CXD2522Q



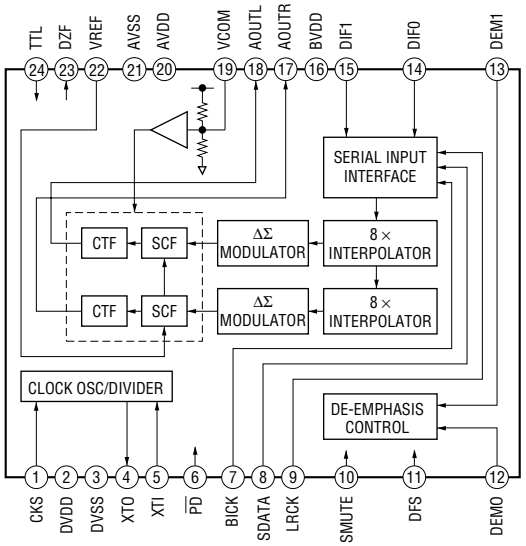
IC402 MSM514400D-60TS-K



IC502 KM62256DLG-7LT



IC601 AK4321-VF-E2



7-14. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC201 CXP84332-208Q (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1 to 3	—	O	Not used (open)
4	CH.F	O	Motor drive signal (load chucking direction) output to the chucking motor drive (IC52) "L" active *1
5	CH.R	O	Motor drive signal (save direction) output to the chucking motor drive (IC52) "L" active *1
6	LOAD2	I	Chucking end detect switch (SW11) input terminal "L": When completion of the disc chucking operation
7	LOAD1	I	Save end detect switch (SW12) input terminal "L": When completion of the disc chucking operation
8	SENS2	I	Internal status signal (sense signal) input from the CXA1992BR (IC11)
9	LIM.SW	I	Sled limit in detect switch (SW1) input terminal "L": When the optical pick-up is inner position
10	EE.INIT	I	Initialize signal input for the EEPROM (IC202) "H": format Fixed at "L" in this set
11	EE.CLK	O	Serial data transfer clock signal output to the EEPROM (IC202)
12	EE.DATA	I/O	Two-way data bus with the EEPROM (IC202)
13 to 19	—	O	Not used (open)
20	SINGLE	I	Setting terminal for the single disc/multiple discs mode "L": single mode, "H": multiple discs mode (fixed at "H")
21	$\overline{\text{XRST}}$	O	System reset signal output to the CXA1992BR (IC11), CXD2530Q (IC101) and CXD2522Q (IC401) "L": reset
22	FOK	I	Focus OK signal input from the CXA1992BR (IC11) "L": NG, "H": OK
23	SENS	I	Internal status signal (sense signal) input from the CXD2530Q (IC101)
24	GFS	I	Guard frame sync signal input from the CXD2530Q (IC101) "L": NG, "H": OK
25	GRSRT	O	Reset signal output to the CXD2522Q (IC401) "L": reset
26	XQOK	O	Subcode Q OK pulse signal output to the CXD2522Q (IC401) "L" active
27	SDTI	I	ESP status signal input from the CXD2522Q (IC401)
28	XSOE	O	ESP status read enable signal output to the CXD2522Q (IC401) "L" active
29	ESPXLT	O	ESP latch pulse signal output to the CXD2522Q (IC401) "L" active
30	$\overline{\text{RST}}$	I	System reset signal input from the SONY bus interface (IC302) and reset signal generator (IC304) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
31	EXTAL	I	Main system clock input terminal (8 MHz)
32	XTAL	O	Main system clock output terminal (8 MHz)
33	VSS	—	Ground terminal
34	TX	O	Sub system clock output terminal Not used (open)
35	TEX	I	Sub system clock input terminal Not used (fixed at "L")
36	AVSS	—	Ground terminal (for A/D converter)
37	AVREF	I	Reference voltage (+5V) input terminal (for A/D converter)
38	MCK	I	Input of signal for the fine adjustment (linear position sensor adjustment; RV201) of elevator position (A/D input)
39	EHS	I	Elevator height position detect input from the RV202 (elevator height sensor) (A/D input)
40	H.TEMP	I	High temperature sensor input terminal Not used (fixed at "L")
41	XRDE	O	D-RAM read enable signal output to the CXD2522Q (IC401) "L" active
42	XWRE	O	D-RAM write enable signal output to the CXD2522Q (IC401) "L" active
43	A.MUTE	O	Audio line muting on/off control signal output terminal "H": muting on
44	EMP	O	Emphasis mode output to the D/A converter (IC601) "H": emphasis on
45	ML	O	Fast speed dubbing control signal output to the D/A converter (IC601) "L": fast speed
46	GRSCOR	I	Subcode sync (S0+S1) detection signal input from the CXD2522Q (IC401)

Pin No.	Pin Name	I/O	Description
47	$\overline{\text{D/A.RESET}}$	O	Reset signal output to the D/A converter (IC601) "L": reset
48	SCK	I	Serial data transfer clock signal input from the SONY bus interface (IC302)
49	SI	I	Serial data input from the SONY bus interface (IC302)
50	SO	O	Serial data output to the SONY bus interface (IC302)
51	SCLK	O	Subcode Q data reading clock signal output to the CXD2530Q (IC101)
52	SUBQ	I	Subcode Q data input from the CXD2530Q (IC101)
53	—	O	Not used (open)
54	C.OUT	I	Track number count signal input from the CXA1992BR (IC11)
55	BUS.ON	I	Bus on/off control signal input from the SONY bus interface (IC302) "H": bus on
56	A/D.SW	I	Analog/digital select switch (SW801) input terminal "L": digital, "H": analog
57	MGLK	I	Magazine eject operation completion detect switch (SW201) input "L": magazine detected
58	ELV.F	O	Motor drive signal (elevator up direction) output to the elevator motor drive (IC301) "L" active *2
59	—	O	Not used (open)
60	MAG.SW	I	Magazine in/out detect switch (SW202) input "L": normally "H": magazine in/out operation
61	BU.CHK	I	Battery detection signal input terminal "H": battery on
62	W.UP	I	Bus on or eject switch (SW301) input terminal "H": bus on or eject switch pushing
63	SCOR	I	Subcode sync (S0+S1) detection signal input from the CXD2530Q (IC101)
64	EJECT	I	Eject switch (SW301) input terminal "H" active
65	CD.CLK	O	Serial data transfer clock signal output to the CXD2530Q (IC101) and CXD2522Q (IC401)
66	CD.XLT	O	Serial data latch pulse signal output to the CXD2530Q (IC101)
67	CD.DATA	O	Serial data output to the CXD2530Q (IC101) and CXD2522Q (IC401)
68	CD.ON	O	D/A converter and servo section power supply on/off control signal output "H": power on
69	ELV.ON	O	Mechanism deck section power supply on/off control signal output "H": power on
70	ELV.R	O	Motor drive signal (elevator down direction) output to the elevator motor drive (IC301) "L" active *2
71	—	O	Not used (open)
72	VDD	—	Power supply terminal (+5V)
73	NC (VDD)	—	Connected to the power supply (+5V)
74	$\overline{\text{BUSY}}$	I	Busy monitor input from the CD text decoder (IC501) "L": busy status
75	$\overline{\text{RESET}}$	O	Reset signal output to the CD text decoder (IC501) "L": reset
76	REQ	I	Data request signal input from the CD text decoder (IC501) "L" active
77	CCCLK	O	Command clock signal output to the CD text decoder (IC501)
78	CSO	O	Command data output to the CD text decoder (IC501)
79	CSI	I	Command data input from the CD text decoder (IC501)
80	ADJ	I	Automatic/manual adjustment selection terminal "L": manual adjustment mode, "H": automatic adjustment mode (fixed at "H" in this set)

*1 chucking motor (M103) control

Terminal \ Mode	STOP	LOAD CHUCKING	SAVE	BRAKE
CH.F (pin ④)	"H"	"L"	"H"	"L"
CH.R (pin ⑤)	"H"	"H"	"L"	"L"

*2 elevator motor (M104) control

Terminal \ Mode	STOP	ELEVATOR UP	ELEVATOR DOWN	BRAKE
ELV.F (pin ㊽)	"H"	"L"	"H"	"L"
ELV.R (pin ㊿)	"H"	"H"	"L"	"L"

• **MAIN BOARD IC501 CXP83413-049Q (CD TEXT DECODER)**

Pin No.	Pin Name	I/O	Function
1, 2	NC	O	Not used (open)
3	NC	I	Not used (fixed at "L")
4	$\overline{\text{REQ}}$	O	Request signal output to the system controller (IC201) "L" active
5	CCLK	I	Serial data transfer clock signal input from the system controller (IC201)
6	CSI	I	Serial data input from the system controller (IC201)
7	$\overline{\text{CSO}}$	O	Serial data output to the system controller (IC201)
8	SCLK	O	Clock signal output for subcode data reading to the CXD2530Q (IC101)
9	SSI	I	Subcode data input from the CXD2530Q (IC101)
10	NC	O	Not used (open)
11 to 18	ADD0 to ADD7	O	Address signal output to the S-RAM (IC502)
19	NC	I	Not used (fixed at "L")
20 to 27	DATA0 to DATA7	I/O	Two-way data bus with the S-RAM (IC502)
28	$\overline{\text{RST}}$	I	System reset signal input from the system controller (IC201), SONY bus interface (IC302) and reset signal generator (IC304) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
29	EXTAL	I	System clock input terminal (10 MHz)
30	XTAL	O	System clock output terminal (10 MHz)
31	VSS	—	Ground terminal
32 to 55	NC	O	Not used (open)
56	BUSY	O	Busy signal output to the system controller (IC201) "L": busy status
57 to 61	NC	O	Not used (open)
62	$\overline{\text{CE}}$	O	Chip enable signal output to the S-RAM (IC502) "L" active
63	$\overline{\text{WE}}$	O	Data write enable signal output to the S-RAM (IC502) "L" active
64 to 69	ADD8 to ADD13	O	Address signal output to the S-RAM (IC502)
70	VDD	—	Power supply terminal (+5V)
71, 72	NC	O	Not used (open)
73	NC	I	Not used (fixed at "H")
74	ADD14	O	Address signal output to the S-RAM (IC502)
75	NC	O	Not used (open)
76	SCOR	I	Subcode sync (S0+S1) detection signal input from the CXD2530Q (IC101)
77	WFCK	I	Write frame clock (7.35 kHz) signal input from the CXD2530Q (IC101)
78	BUCK	I	Backup power supply detection signal input terminal (used also to reset standby)
79, 80	NC	I	Not used (fixed at "L")

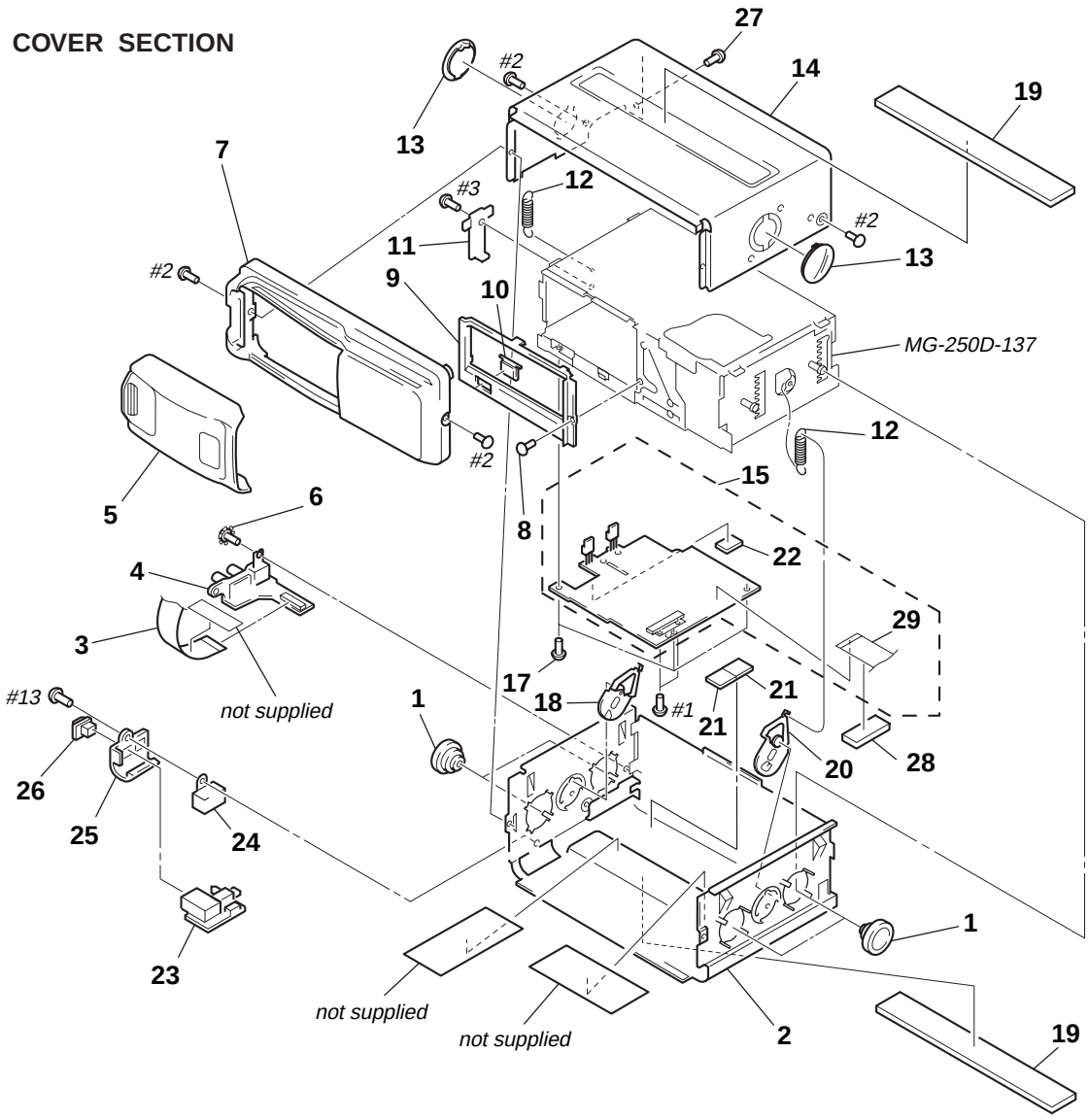
SECTION 8
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

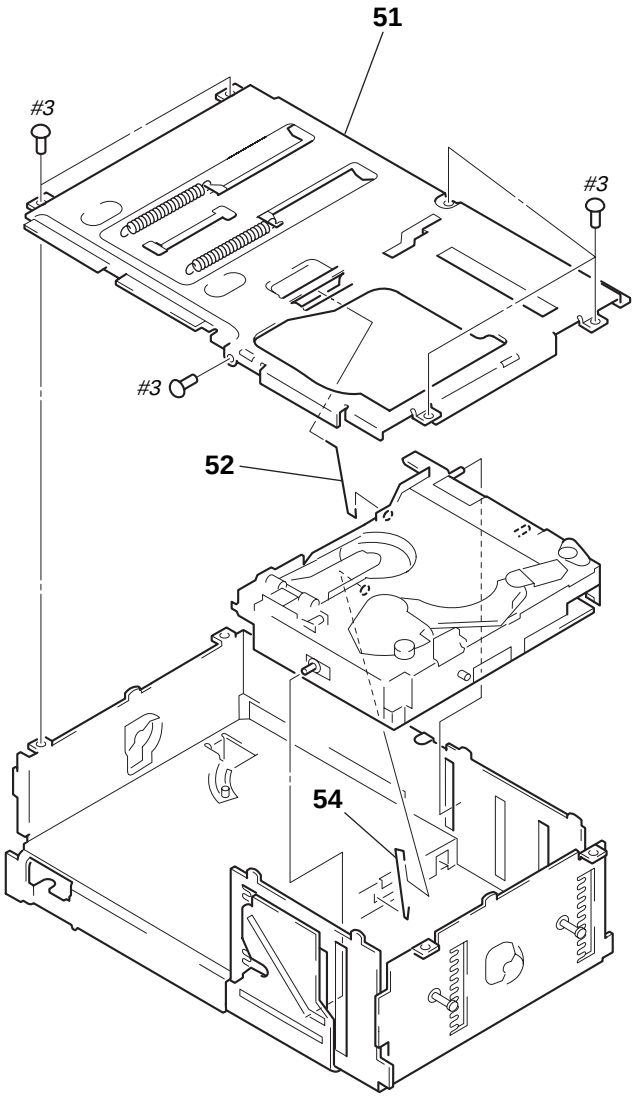
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

(1) COVER SECTION



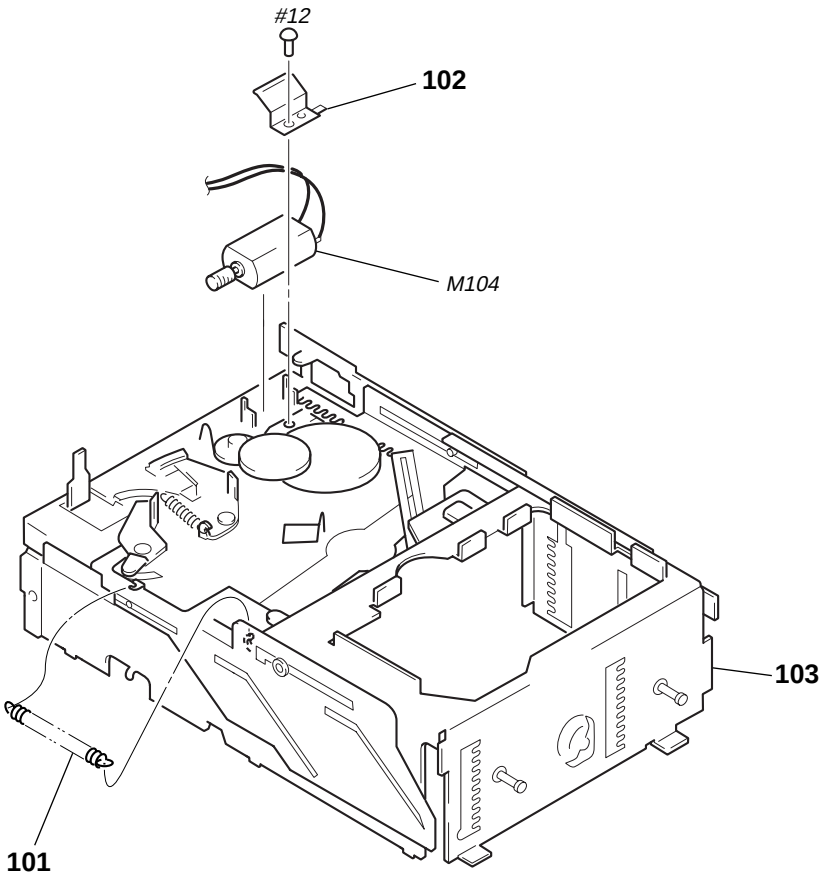
Ref. No.	Part No.	Description	Remark
1	3-022-011-01	DAMPER (250)	
* 2	3-040-799-01	COVER (LOWER T)	
3	1-664-796-11	JACK FLEXIBLE BOARD	
* 4	1-672-617-12	JACK BOARD	
5	X-3378-096-1	DOOR (T) ASSY (US, Canadian)	
5	X-3378-424-1	DOOR (T) ASSY (E)	
6	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
7	3-030-490-51	PANEL (T), FRONT	
8	3-012-388-01	SCREW (M2X3)	
9	3-022-006-02	ESCUTCHEON (T)	
10	3-022-007-02	BUTTON (EJT) (⏏)	
* 11	3-022-012-01	HEAT SINK (T)	
12	3-038-166-01	SPRING (FL), TENSION COIL	
13	3-022-010-31	LEVER (FLT)	
* 14	3-040-800-01	COVER (UPPER T)	
* 15	A-3326-237-A	MAIN BOARD, COMPLETE	
17	3-935-636-11	SCREW (FP)	
18	X-3375-357-1	ARM (FLT) ASSY	
* 19	3-041-082-01	PLATE (XPLOD) (E)	
* 19	3-041-082-11	PLATE (XPLOD) (US, Canadian)	
20	X-3375-360-2	ARM (FRT) ASSY	
* 21	3-024-065-01	CUSHION (EJECT-T)	
22	3-028-802-01	SPACER (MOUNT 30)	
* 23	1-672-618-12	DIGITAL OUT BOARD	
* 24	3-011-205-01	BRACKET (LIGHT)	
25	3-011-204-21	COVER (LIGHT)	
26	3-924-924-11	COVER (LIGHT)	
27	3-912-956-11	SCREW (2.6X6) (CU), +BVTT	
28	3-024-067-01	CUSHION (T), BATTERY	
29	1-676-339-11	MAIN FLEXIBLE BOARD	

(2) MECHANISM DECK SECTION-1 (MG-250D-137)



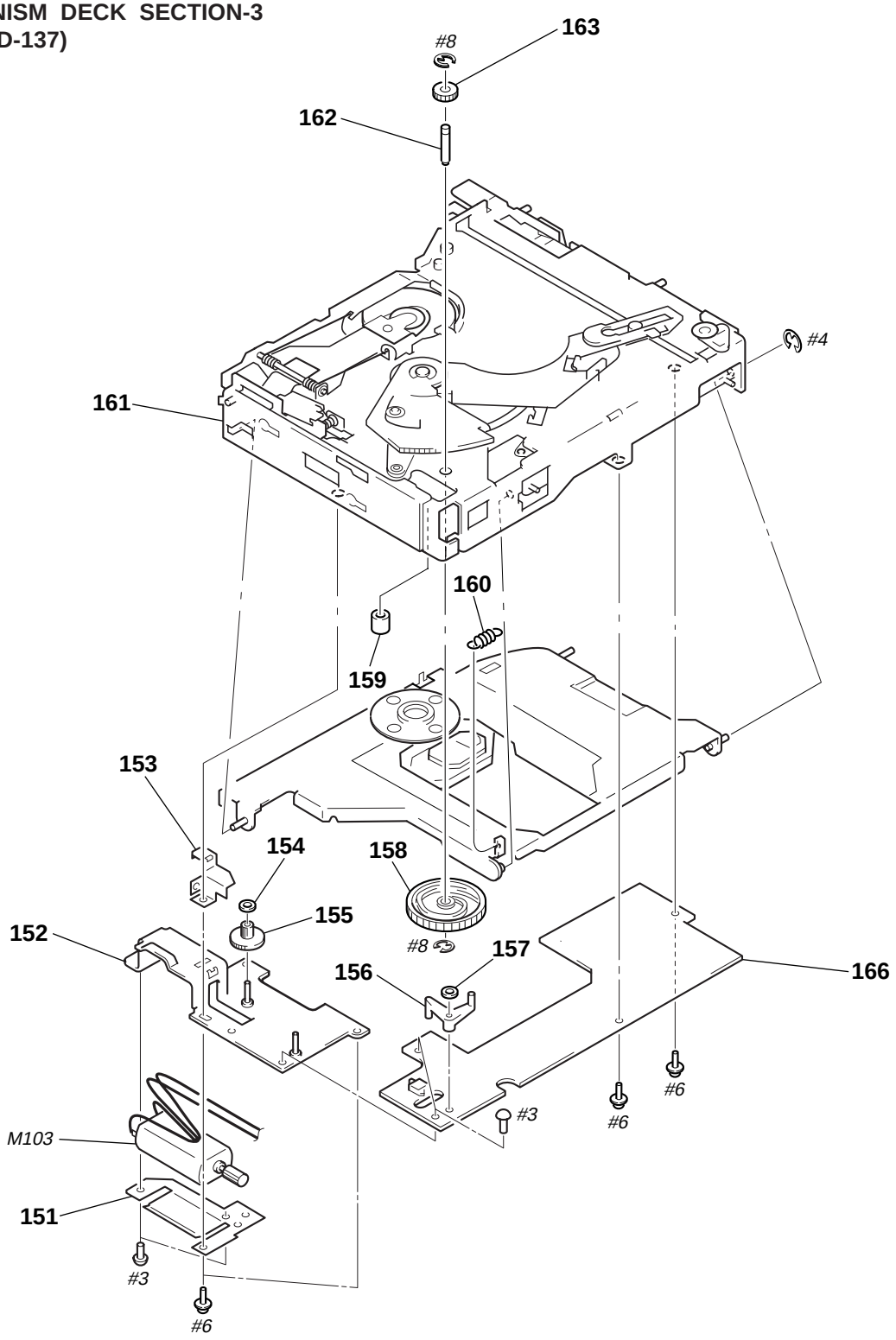
Ref. No.	Part No.	Description	Remark
51	X-3375-497-1	CHASSIS (U) SUB ASSY	
52	3-024-161-01	SPRING (SUT)	
54	3-011-997-01	SPRING (STOPPER. LOWER)	

(3) MECHANISM DECK SECTION-2 (MG-250D-137)



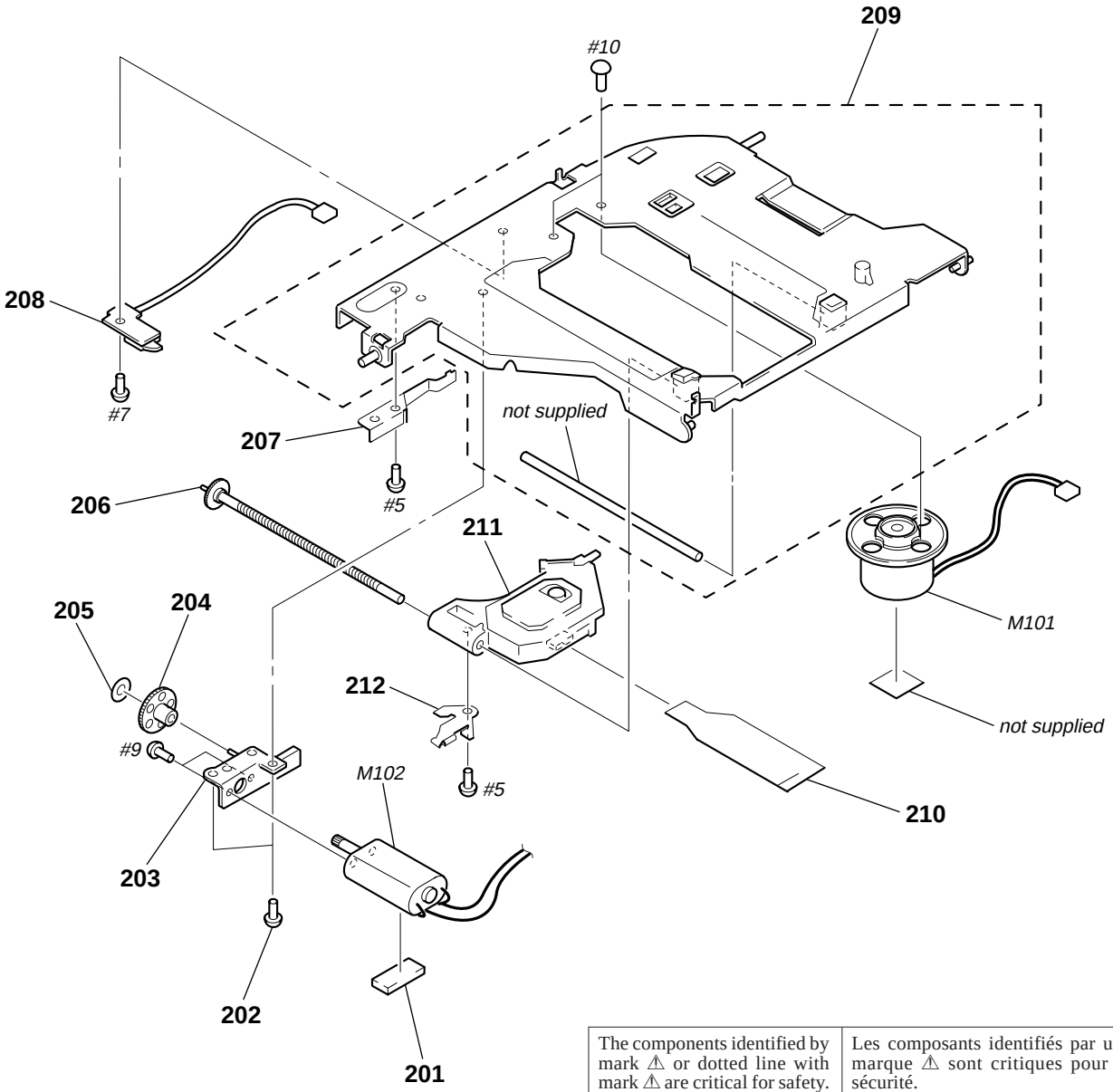
Ref. No.	Part No.	Description	Remark
101	3-024-170-01	SPRING (SB), TENSION	
* 102	3-024-172-01	BRACKET (EVM)	
103	X-3378-136-1	CHASSIS (D. D) SUB ASSY	
M104	A-3301-123-A	ELJ MOTOR ASSY (ELEVATOR)	

(4) MECHANISM DECK SECTION-3 (MG-250D-137)



Ref. No.	Part No.	Description	Remark
* 151	3-024-150-01	RETAINER (CHM)	
* 152	X-3378-080-1	BRACKET (CHM. D) ASSY	
153	3-010-270-01	COVER (CHM)	
154	3-321-813-01	WASHER, COTTER POLYETHYLENE	
155	3-017-139-01	GEAR (NWL)	
156	3-010-255-01	ARM (NSW)	
157	3-573-936-00	STOPPER, REEL	
158	X-3373-552-1	GEAR (LOAD CAM) ASSY	
159	3-010-252-01	ROLLER (CRE)	
160	3-010-268-01	SPRING (DH), TENSION	
* 161	A-3290-194-I	MAIN ASSY, CHASSIS (EVY)	
162	3-010-254-01	SHAFT (ROTARY PREVENTION C)	
163	3-010-253-01	GEAR (ML)	
* 166	A-3317-993-A	RF BOARD, COMPLETE	
M103	A-3301-123-A	ELJ MOTOR ASSY (CHUCKING)	

(5) MECHANISM DECK SECTION-4 (MG-250D-137)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
201	3-911-215-02	SHEET (LEAD RETAINER)	
202	3-920-362-01	SCREW (ESCUTCHEON)	
203	X-3375-219-1	HOLDER (SLED) ASSY	
204	3-022-841-01	GEAR (SD)	
205	3-573-936-00	STOPPER, REEL	
206	A-3291-958-A	SHAFT (SLED) ASSY	
207	3-010-263-01	DETENT (SHAFT THRUST)	

Ref. No.	Part No.	Description	Remark
* 208	1-664-104-11	SW BOARD	
* 209	A-3301-077-B	BASE (OPT) (J) ASSY	
210	1-664-626-11	OP FLEXIBLE BOARD	
⚠211	8-820-010-06	OPTICAL PICK-UP KSS-521A/J2RP	
212	3-010-262-01	DETENT (SLED)	
M101	A-3291-956-B	MOTOR SUB ASSY, SPINDLE	
M102	A-3291-955-A	MOTOR SUB ASSY, SLED	

SECTION 9
ELECTRICAL PARTS LIST

DIGITAL OUT

JACK | **MAIN**

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	1-672-618-12	DIGITAL OUT BOARD			
		**********			
*	3-011-205-01	BRACKET (LIGHT)			
		< CAPACITOR >			
C801	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
		< CONNECTOR >			
CN801	1-770-621-21	PIN, CONNECTOR 4P			
		< IC >			
IC801	8-749-923-53	IC TOTX193 (DIGITAL OUT)			
		< RESISTOR >			
R801	1-218-272-11	RES-CHIP	5.1K	5%	1/16W
		< SWITCH >			
SW801	1-571-478-11	SWITCH, SLIDE (DIGITAL/ANALOG)			
**********					
*	1-672-617-12	JACK BOARD			
		**********			
		< CAPACITOR >			
C901	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C902	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C903	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C904	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
		< CONNECTOR >			
CN901	1-779-077-71	PLUG, CONNECTOR (CONTROL/ANALOG OUT)			
CN902	1-770-621-21	PIN, CONNECTOR 4P			
CN903	1-779-321-11	CONNECTOR, FFC/FPC 16P			
		< FERRITE BEAD >			
FB901	1-500-445-21	FERRITE	0uH		
FB903	1-500-445-21	FERRITE	0uH		
		< IC >			
IC901	1-532-686-21	LINK, IC			

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R901	1-216-295-00	SHORT	0		
**********					
*	A-3326-237-A	MAIN BOARD, COMPLETE			
		**********			
	1-676-339-11	MAIN FLEXIBLE BOARD			
	3-028-802-01	SPACER (MOUNT 30)			
		< CAPACITOR >			
C101	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C102	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C103	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C104	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C105	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C106	1-135-214-21	TANTALUM CHIP	4.7uF	20%	20V
C107	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C108	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C110	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C112	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C113	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C114	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C115	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C201	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C202	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C203	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C204	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C205	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C301	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C302	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C303	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C304	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C305	1-163-029-11	CERAMIC CHIP	0.0047uF		50V
C306	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C307	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C308	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C309	1-125-701-11	DOUBLE LAYER	0.047F		5.5V
C310	1-104-953-11	ELECT	47uF	20%	16V
C311	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C312	1-115-650-11	ELECT	47uF	20%	16V
C314	1-104-953-11	ELECT	47uF	20%	16V
C315	1-163-038-00	CERAMIC CHIP	0.1uF		25V

MAIN

Ref. No.	Part No.	Description			Remark
C316	1-135-605-21	ELECT	1000uF		16V
C317	1-115-651-11	ELECT	100uF	20%	16V
C318	1-135-612-61	ELECT	100uF	20%	16V
C319	1-135-613-61	ELECT	47uF	20%	16V
C320	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C321	1-115-650-11	ELECT	47uF	20%	16V
C322	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C401	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C402	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C403	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C404	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C405	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C501	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C502	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C503	1-125-701-11	DOUBLE LAYER	0.047F		5.5V
C504	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C601	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C603	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C604	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C605	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C606	1-115-650-11	ELECT	47uF	20%	16V
C608	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C609	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C611	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C612	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C613	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C614	1-115-650-11	ELECT	47uF	20%	16V
C615	1-115-650-11	ELECT	47uF	20%	16V
C616	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C617	1-104-913-11	TANTALUM CHIP	10uF	20%	16V
C618	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C619	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C621	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN301	1-774-679-21	CONNECTOR, FPC 16P			
		< DIODE >			
D301	8-719-975-40	DIODE	RB411D-T146		
D302	8-719-017-94	DIODE	MA8180-TX		
D303	8-719-017-94	DIODE	MA8180-TX		
D304	8-719-975-40	DIODE	RB411D-T146		
D305	8-719-975-40	DIODE	RB411D-T146		
D306	8-719-801-78	DIODE	1SS184-TE85L		
D307	8-719-422-64	DIODE	MA8062-M-TX		
D308	8-719-988-61	DIODE	1SS355TE-17		
D309	8-719-210-33	DIODE	EC10DS2-TE12L5		
D310	8-719-988-61	DIODE	1SS355TE-17		
D311	8-719-038-48	DIODE	1SS319 (TE85R)		
D312	8-719-422-62	DIODE	MA8062-L-TX		
D313	8-719-210-33	DIODE	EC10DS2-TE12L5		
D314	8-719-975-40	DIODE	RB411D-T146		
D501	8-719-988-61	DIODE	1SS355TE-17		
D502	8-719-975-40	DIODE	RB411D-T146		

Ref. No.	Part No.	Description			Remark
		< FERRITE BEAD >			
FB402	1-500-445-21	FERRITE	0uH		
FB403	1-500-445-21	FERRITE	0uH		
FB404	1-500-445-21	FERRITE	0uH		
FB601	1-500-445-21	FERRITE	0uH		
FB602	1-500-445-21	FERRITE	0uH		
FB603	1-500-445-21	FERRITE	0uH		
FB604	1-500-445-21	FERRITE	0uH		
FB605	1-500-445-21	FERRITE	0uH		
		< IC >			
IC101	8-752-384-15	IC	CXD2530Q		
IC201	8-752-902-63	IC	CXP84332-208Q		
IC202	8-759-660-38	IC	BR24C16FJ-E2		
IC301	8-759-040-83	IC	BA6287F		
IC302	8-759-444-86	IC	BA8272F-E2		
IC303	8-759-054-12	IC	PQ09RA1		
IC304	8-759-363-81	IC	XC61AN4002PR		
IC305	8-759-231-53	IC	M5F7805L		
IC306	8-759-284-66	IC	TA78M08F (TE16L)		
IC307	8-759-284-63	IC	TA78M05F (TE16L)		
IC401	8-752-374-09	IC	CXD2522Q		
IC402	8-759-576-67	IC	MSM514400D-60TS-K		
IC403	8-759-242-76	IC	TC7W08F-TE12L		
IC501	8-752-904-83	IC	CXP83413-049Q		
IC502	8-759-497-29	IC	KM62256DLG-7LT		
IC503	8-759-243-19	IC	TC7SU04F-TE85L		
IC601	8-759-455-21	IC	AK4321-VF-E2		
IC602	8-759-064-92	IC	NJM5532MD-T1		
IC603	8-759-243-19	IC	TC7SU04F-TE85L		
IC604	8-759-243-19	IC	TC7SU04F-TE85L		
		< COIL >			
L601	1-410-381-11	INDUCTOR CHIP	10uH		
		< TRANSISTOR >			
Q201	8-729-020-67	TRANSISTOR	XN1A312-TX		
Q301	8-729-027-31	TRANSISTOR	DTA124EKA-T146		
Q302	8-729-230-49	TRANSISTOR	2SC2712-YG-TE85L		
Q303	8-729-016-11	TRANSISTOR	2SD1864		
Q304	8-729-901-00	TRANSISTOR	DTC124EKA-T146		
Q305	8-729-016-83	TRANSISTOR	2SB1446-TA		
Q601	8-729-901-00	TRANSISTOR	DTC124EKA-T146		
Q602	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q603	8-729-015-39	TRANSISTOR	DTC323TKT146		
Q604	8-729-015-39	TRANSISTOR	DTC323TKT146		
		< RESISTOR >			
R101	1-216-105-00	RES-CHIP	220K	5%	1/10W
R102	1-216-121-00	RES-CHIP	1M	5%	1/10W
R103	1-216-113-00	METAL CHIP	470K	5%	1/10W
R104	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R105	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R106	1-216-073-00	METAL CHIP	10K	5%	1/10W
R107	1-216-121-00	RES-CHIP	1M	5%	1/10W
R108	1-216-073-00	METAL CHIP	10K	5%	1/10W
R109	1-216-097-00	RES-CHIP	100K	5%	1/10W
R110	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R111	1-216-049-11	RES-CHIP	1K	5%	1/10W
R114	1-216-049-11	RES-CHIP	1K	5%	1/10W
R201	1-216-089-00	RES-CHIP	47K	5%	1/10W
R202	1-216-089-00	RES-CHIP	47K	5%	1/10W
R203	1-216-089-00	RES-CHIP	47K	5%	1/10W
R204	1-216-089-00	RES-CHIP	47K	5%	1/10W
R205	1-216-081-00	METAL CHIP	22K	5%	1/10W
R206	1-216-089-00	RES-CHIP	47K	5%	1/10W
R207	1-216-049-11	RES-CHIP	1K	5%	1/10W
R208	1-216-089-00	RES-CHIP	47K	5%	1/10W
R210	1-216-089-00	RES-CHIP	47K	5%	1/10W
R211	1-216-089-00	RES-CHIP	47K	5%	1/10W
R212	1-216-089-00	RES-CHIP	47K	5%	1/10W
R213	1-216-089-00	RES-CHIP	47K	5%	1/10W
R214	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R215	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R219	1-216-049-11	RES-CHIP	1K	5%	1/10W
R301	1-216-089-00	RES-CHIP	47K	5%	1/10W
R302	1-216-089-00	RES-CHIP	47K	5%	1/10W
R303	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R304	1-216-089-00	RES-CHIP	47K	5%	1/10W
R305	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R306	1-216-077-00	RES-CHIP	15K	5%	1/10W
R307	1-216-049-11	RES-CHIP	1K	5%	1/10W
R308	1-216-073-00	METAL CHIP	10K	5%	1/10W
R309	1-216-089-00	RES-CHIP	47K	5%	1/10W
R311	1-216-089-00	RES-CHIP	47K	5%	1/10W
R312	1-216-073-00	METAL CHIP	10K	5%	1/10W
R313	1-216-295-00	SHORT	0		
R316	1-216-073-00	METAL CHIP	10K	5%	1/10W
R401	1-216-033-00	METAL CHIP	220	5%	1/10W
R402	1-216-105-00	RES-CHIP	220K	5%	1/10W
R403	1-216-033-00	METAL CHIP	220	5%	1/10W
R501	1-216-089-00	RES-CHIP	47K	5%	1/10W
R502	1-216-049-11	RES-CHIP	1K	5%	1/10W
R503	1-216-049-11	RES-CHIP	1K	5%	1/10W
R504	1-216-073-00	METAL CHIP	10K	5%	1/10W
R505	1-216-049-11	RES-CHIP	1K	5%	1/10W
R601	1-216-041-00	METAL CHIP	470	5%	1/10W
R602	1-216-033-00	METAL CHIP	220	5%	1/10W
R603	1-216-683-11	METAL CHIP	22K	0.5%	1/10W
R604	1-216-683-11	METAL CHIP	22K	0.5%	1/10W
R605	1-216-049-11	RES-CHIP	1K	5%	1/10W
R606	1-216-049-11	RES-CHIP	1K	5%	1/10W
R607	1-216-685-11	METAL CHIP	27K	0.5%	1/10W
R608	1-216-685-11	METAL CHIP	27K	0.5%	1/10W
R609	1-216-073-00	METAL CHIP	10K	5%	1/10W
R611	1-216-691-11	METAL CHIP	47K	0.5%	1/10W
R612	1-216-691-11	METAL CHIP	47K	0.5%	1/10W
R613	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R614	1-216-035-00	METAL CHIP	270	5%	1/10W
R615	1-216-035-00	METAL CHIP	270	5%	1/10W
R616	1-216-121-00	RES-CHIP	1M	5%	1/10W

< VARIABLE RESISTOR >

RV201	1-223-834-11	RES, ADJ, CARBON 47K	
RV201	1-225-951-21	RES, VAR, SLIDE 10K	(ELEVATOR HEIGHT SENSOR)

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
SW201	1-771-540-11	SWITCH, PUSH (1 KEY) (MAGAZINE DETECT)	
SW202	1-771-540-11	SWITCH, PUSH (1 KEY) (MAGAZINE IN/OUT DETECT)	
SW301	1-571-532-21	SWITCH, TACTIL (⏏)	
		< VIBRATOR >	
X201	1-767-261-21	VIBRATOR, CERAMIC (8MHz)	
X501	1-767-510-11	VIBRATOR, CERAMIC (10MHz)	
X601	1-767-366-41	VIBRATOR, CERAMIC (16.9344MHz)	

****

*	A-3317-993-A	RF BOARD, COMPLETE	
		**********	
		< CAPACITOR >	

C10	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C12	1-113-500-11	TANTALUM CHIP	100uF	20%	10V
C13	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C14	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C15	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C16	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C17	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C18	1-111-253-11	TANTALUM CHIP	100uF	20%	6.3V
C19	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C21	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C22	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C23	1-113-682-11	TANTALUM CHIP	33uF	20%	10V
C24	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C25	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C26	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C27	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C28	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C29	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C30	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C31	1-113-987-11	TANTALUM CHIP	4.7uF	20%	25V
C32	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C33	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C34	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C35	1-104-700-11	CERAMIC CHIP	0.027uF	10%	16V
C36	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C37	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C38	1-104-913-11	TANTALUM CHIP	10uF	20%	16V
C39	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C40	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C41	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C42	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C43	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C51	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C52	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C53	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C54	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C55	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C56	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C57	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C58	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C59	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C60	1-104-914-11	TANTALUM CHIP	22uF	20%	16V

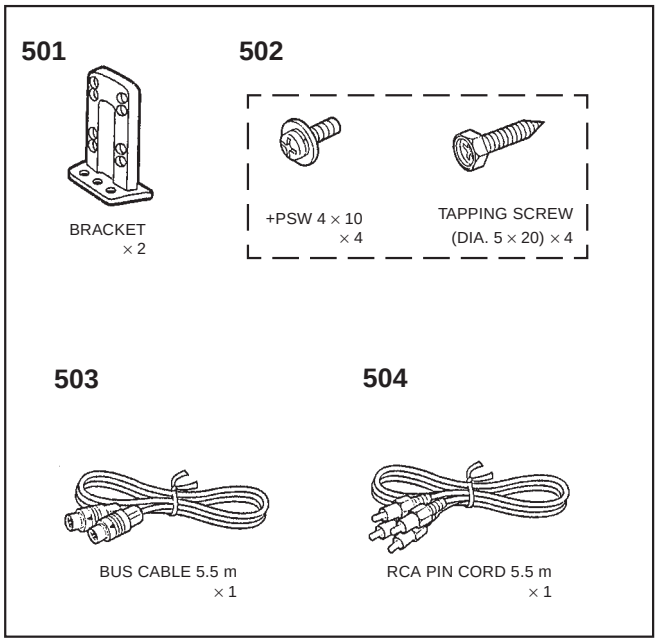
RF **SW**

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
CNJ11	1-778-776-21	CONNECTOR, FPC 17P			
CNJ12	1-778-777-21	CONNECTOR, FPC 26P			
* CNP53	1-580-055-21	PIN, CONNECTOR (SMD) 2P			
		< IC >			
IC11	8-752-082-14	IC CXA1992BR			
IC51	8-759-071-79	IC BA6297AFP			
IC52	8-759-040-83	IC BA6287F			
		< TRANSISTOR >			
Q11	8-729-141-48	TRANSISTOR	2SB624T1-BV345		
		< RESISTOR >			
R11	1-218-348-11	RES-CHIP	110K	5%	1/16W
R12	1-216-839-11	METAL CHIP	33K	5%	1/16W
R13	1-216-839-11	METAL CHIP	33K	5%	1/16W
R14	1-218-348-11	RES-CHIP	110K	5%	1/16W
R16	1-216-857-11	METAL CHIP	1M	5%	1/16W
R17	1-216-837-11	METAL CHIP	22K	5%	1/16W
R18	1-216-841-11	METAL CHIP	47K	5%	1/16W
R22	1-216-857-11	METAL CHIP	1M	5%	1/16W
R25	1-216-851-11	METAL CHIP	330K	5%	1/16W
R26	1-216-845-11	METAL CHIP	100K	5%	1/16W
R27	1-216-295-00	SHORT	0		
R28	1-216-295-00	SHORT	0		
R30	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R31	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R32	1-216-837-11	METAL CHIP	22K	5%	1/16W
R33	1-216-158-00	RES-CHIP	22	5%	1/8W
R34	1-216-855-11	METAL CHIP	680K	5%	1/16W
R35	1-216-835-11	METAL CHIP	15K	5%	1/16W
R36	1-216-836-11	METAL CHIP	18K	5%	1/16W
R37	1-216-851-11	METAL CHIP	330K	5%	1/16W
R38	1-216-837-11	METAL CHIP	22K	5%	1/16W
R39	1-216-847-11	METAL CHIP	150K	5%	1/16W
R40	1-218-273-11	RES-CHIP	510K	5%	1/16W
R41	1-218-296-11	RES-CHIP	75K	5%	1/16W
R42	1-202-930-11	RES-CHIP	750K	5%	1/16W
R43	1-216-849-11	METAL CHIP	220K	5%	1/16W
R44	1-216-846-11	METAL CHIP	120K	5%	1/16W
R45	1-216-837-11	METAL CHIP	22K	5%	1/16W
R46	1-216-847-11	METAL CHIP	150K	5%	1/16W
R47	1-216-834-11	METAL CHIP	12K	5%	1/16W
R48	1-216-845-11	METAL CHIP	100K	5%	1/16W
R49	1-216-093-11	RES-CHIP	68K	5%	1/10W
R50	1-216-841-11	METAL CHIP	47K	5%	1/16W
R51	1-216-073-00	METAL CHIP	10K	5%	1/10W
R52	1-216-093-11	RES-CHIP	68K	5%	1/10W
R53	1-216-073-00	METAL CHIP	10K	5%	1/10W
R54	1-216-073-00	METAL CHIP	10K	5%	1/10W
R55	1-216-073-00	METAL CHIP	10K	5%	1/10W
R56	1-216-093-11	RES-CHIP	68K	5%	1/10W
R57	1-216-081-00	METAL CHIP	22K	5%	1/10W
R58	1-216-093-11	RES-CHIP	68K	5%	1/10W
R59	1-216-073-00	METAL CHIP	10K	5%	1/10W
R60	1-216-073-00	METAL CHIP	10K	5%	1/10W
R61	1-216-073-00	METAL CHIP	10K	5%	1/10W
R62	1-216-085-00	METAL CHIP	33K	5%	1/10W
R63	1-216-073-00	METAL CHIP	10K	5%	1/10W
R64	1-216-073-00	METAL CHIP	10K	5%	1/10W
R65	1-216-073-00	METAL CHIP	10K	5%	1/10W
		< VARIABLE RESISTOR >			
RV14	1-238-091-11	RES, ADJ, CERMET	22K		
		< SWITCH >			
SW11	1-762-946-12	SWITCH, PUSH (1 KEY) (CHUCKING END DETECT)			
SW12	1-762-946-12	SWITCH, PUSH (1 KEY) (SAVE END DETECT)			
**********					
*	1-664-104-11	SW BOARD			
		*********			
SW1	1-529-565-11	SWITCH, PUSH (1 KEY) (LIMIT)			
**********					
		MISCELLANEOUS			
		**********			
3	1-664-796-11	JACK FLEXIBLE BOARD			
210	1-664-626-11	OP FLEXIBLE BOARD			
⚠211	8-820-010-06	OPTICAL PICK-UP KSS-521A/J2RP			
M101	A-3291-956-B	MOTOR SUB ASSY, SPINDLE			
M102	A-3291-955-A	MOTOR SUB ASSY, SLED			
M103	A-3301-123-A	ELJ MOTOR ASSY (CHUCKING)			
M104	A-3301-123-A	ELJ MOTOR ASSY (ELEVATOR)			
**********					
		**********			
		HARDWARE LIST			
		**********			
#1	7-627-852-07	SCREW, PRECISION +P 1.7X2.5			
#2	7-685-792-09	SCREW +PTT 2.6X6 (S)			
#3	7-685-781-09	SCREW +PTT 2X4 (S)			
#4	7-624-104-04	STOPRING 2.0, TYPE -E			
#5	7-627-554-07	SCREW, PRECISION +P 2X2.2			
#6	7-628-253-00	SCREW +PS 2X4			
#7	7-627-553-27	SCREW, PRECISION +P 2X2.5			
#8	7-624-102-04	STOPRING 1.5, TYPE-E			
#9	7-627-850-28	SCREW, PRECISION +P 1.4X3			
#10	7-627-000-00	SCREW, PRECISION +P 1.7X2.2 TYPE 3			
#12	7-685-780-09	SCREW +PTT 2X3 (S)			
#13	7-685-853-04	SCREW +BVTT 2X6 (S)			
**********					

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		**********	
	3-867-909-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, CHINESE)	
	A-3291-950-C	MAGAZINE (250T) ASSY	
**********			
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
501	3-040-583-21	BRACKET	
* 502	X-3369-824-1	SCREW ASSY	
503	1-590-519-21	CORD (WITH CONNECTOR) (BUS CABLE 5.5m)	
504	1-790-455-21	CORD, CONNECTION (RCA PIN CORD 5.5m)	



9-870-026-11

Sony Corporation
Mobile Electronics Division Company

99L057035-1
Printed in Singapore © 1999. 12
Published by General Engineering Dept.